

The End of Empire

by Peter B. Sonenstein

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**Cast of Characters**  
in order of appearance

Jamaal Warner, Junior Algorithm Engineer, male, 19-25  
Elsa Kim, Of Counsel, female, 32-36  
Edgar Botkin, Chief Executive Officer & Founder, male, 30-35  
Mina Silverman, Chief Operating Officer, female, 45-50  
Marty Klein, Vice President of Global Public Policy, female,  
47-52  
Raj Patel, Chief Technology Officer, male, 35-40  
Senator Kimble, Senior Senator from California, female, 65-70

**Doubled Characters**

Al-Ktwarizmi, the 9th-century mathematician  
Noor, Dev Ops Manager for Africa & the Middle East  
Farida, Client Manager for Africa & the Middle East  
Charles Babbage, 19th-century inventor  
Augusta Ada King, Countess of Lovelace, 19th-century  
mathematician  
Alan Turing, 20th-century mathematician  
John von Neumann, 20th-century mathematician  
Tim, from Apple, 20th-century CEO  
Senator #1  
Senator #2

**Character Doubling**

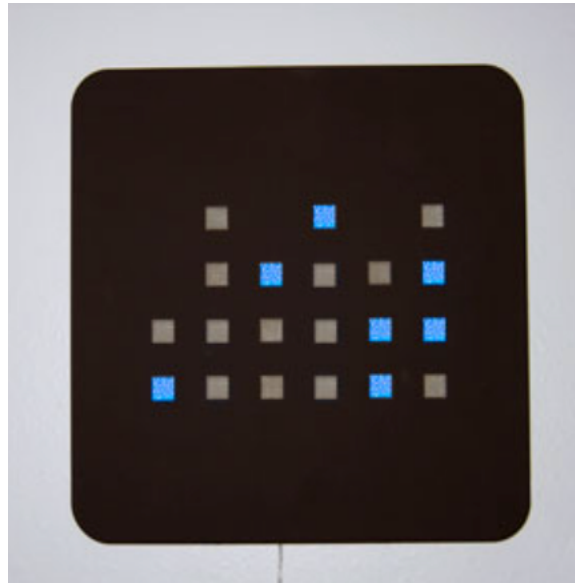
RAJ also plays Al-Khwarizmi, Charles Babbage, Tim from Apple,  
and Senator #1  
ELSA also plays Augusta Ada King, Countess of Lovelace, and  
Senator #2  
JAMAAL also plays Alan Turing  
SENATOR KIMBLE also plays Farida  
MARTY also plays John von Neumann and Noor

**Settings**

Edgar's house, living room, present day  
The Committee on Commerce, Science, and Transportation, Room  
216, the Hart Senate Office Building, present day

**Production Notes**

The primary set of the play is the living room of Edgars house which has a large video wall. The rest of the settings will be suggested using small set pieces, props, lighting/projections and the video wall. Most of the time, the video wall in Edgar's living room should be configured to look like this:



"Today, the belief in American exceptionalism has vanished with the end of empire, the weakening of power, the loss of faith in the nation's future"

- Daniel Bell, *The End of American Exceptionalism*

**PRE-SHOW**

ON SCREEN: Binary clock ticking.

SUPER ON SCREEN: This is a work of fiction. Names, characters, businesses, places and incidents either are products of the author's imagination or are used fictitiously. Any resemblance to actual events, locales, persons, billionaires, living or dead, is entirely coincidental.

**SCENE 1 AL-KHWARIZMI**

ON SCREEN: Moorish geometric patterns

At rise a man, RAJ, sits on a small rug with a low table in front of him. He is writing in Arabic on a large piece of parchment. The light around him has shadows of geometric patterns.

MINA

(to audience)

Imagine for a moment: the year is 825 common era. In the bustling city of Baghdad, deep within the walls of the renowned House of Wisdom, an astronomer is penning down his discoveries. This isn't just any book; this... is a revolution on paper. Meet Mohammad bin Musa al-Khwarizmi. As he meticulously completes his book, little does he know that his words would ripple across time. The title? Roughly translating to On the Calculation with Hindu Numerals Now, you might be thinking, what's so special about this book? Some of you may argue that there are texts, like the Bible, that have had more profound impacts on the trajectory of human history. But al-Khwarizmi's book holds a unique power. Fast forward to the 12th century. His masterpiece is translated into Latin. Suddenly, the Hindu-Arabic numeral system starts to cascade throughout the Middle East and Europe. And those numeral systems... well, today, we have a simpler name for them. Numbers. He wrote several other masterpieces, contributing to fields as diverse as mathematics, geography, astronomy, and cartography. And if that wasn't enough, let's acknowledge this: he virtually created algebra.

RAJ

You divide ten into two parts: multiply the one by itself; it will be equal to the other taken eighty-one times. Computation: You say, ten less thing, multiplied by itself, is a hundred plus a square less twenty things, and this is equal to eighty-one things.

ON SCREEN: The algebraic notation for what RAJ is describing appears on a screen.

$$(10 - x)^2 = 81x$$

$$100 + x^2 - 20x = 81x$$

MINA

The notation evolved later, but the essence was there: the balancing of equations. Adding, subtracting, multiplying or dividing both sides. Concepts that underpin the millisecond calculations of today, that fuel our rockets, and harness atomic energy. Concepts that took centuries to fully understand, each step revealing the marvels and challenges of al-Khwarizmi's legacy.

SUPER ON SCREEN: *Algoritimi de numero Indorum*

MINA (CONT'D)

The Latin translation of his book? *Algoritimi de numero Indorum*. *Algoritimi*. That is Al-Khwarizmi's name in Latin and it is the root of the word "algorithm." Al-Khwarizmi, the man, through translation, is transformed and becomes the algorithm. For his time, he is very old and wise when he writes his book. He is 45 years old.

**SCENE 2 AND SO WE BEGIN...**

ON SCREEN: Binary clock reading 8:12AM.

Friday, 8:12AM.

The entryway and living room of a sleek, modern home. The environment is spare and stylish - like something Philip Johnson might design for a Bond villain. Large glass walls reveal the pale, undulating hills of Northern California - fields of dry grasses with small copses of live oak trees.

On a glass coffee table is a large jagged rock on a stand. On the wall is a panel with a series of columns of soft-hued LED lights that change patterns every second.

There is a large, wooden door, which appears to be the entrance to the house. It has no knob. There are large frosted glass panels on either side of the door.

It is morning, and the house is very still.

THE PERFECT DOORBELL CHIMES, softly.

THE PERFECT DOORBELL CHIMES again. And suddenly AGAIN.

The PERFECT DOORBELL CHIMES and again so suddenly that it is obviously a digital sound file - it interrupts itself. A TENTATIVE KNOCK is heard at the door.

We see movement outside the door - a shadow on the frosted glass, someone trying to see into the house. Every time the figure moves, the THE PERFECT DOORBELL CHIMES. More KNOCKING.

We hear the sound of HEELS ON HARDWOOD. ELSA ENTERS from the hallway. She is dressed an expensive notch above Silicon Valley business casual. She opens the door and finds JAMAAL standing outside.

ELSA

What?

JAMAAL

Oh! Hi. Sorry. I couldn't- I was just- Hi.

ELSA

What?

JAMAAL

Sorry, sorry - I'm Jamaal?

ELSA stares at him. JAMAAL is dressed in pure Silicon Valley tech casual and has a messenger bag over one shoulder. Eventually...

ELSA

And?

JAMAAL

They told me to be here- I'm a little early-  
From the lab?

(pulling out his phone)

I got an email. It's right- wait. I had to  
show it at the gate.

ELSA

Are you coming in?

JAMAAL

What? Sure, yes. I couldn't tell how the  
doorbell // worked.

JAMAAL steps through the door. The  
door CLOSES ON IT'S OWN behind  
them.

ELSA

Wait here.

ELSA EXITS down the hallway.

JAMAAL stands by the door scrolling  
through his phone. He takes a step  
away from the door, then another,  
looking down the hallway.

He goes deeper into the room  
looking at the objects on the  
shelves and tables. He stands in  
front of the LED panel, watching  
it. He smiles and takes a picture  
of it with his phone.

Hesitantly, he sits down on the  
couch. His gaze settles on the  
large, jagged rock which is sitting  
on the coffee table. He takes  
another look down the hall, then  
positions himself in a selfie with  
the rock, pointing at it.

A BURST OF MANY PEOPLE LAUGHING  
comes from down the hallway. and  
JAMAAL quickly stands up. He looks  
down the hallway expectantly. But  
nothing happens.

We hear the sound of HEELS ON  
HARDWOOD and ELSA ENTERS. She holds  
a TABLET.

JAMAAL  
I found the email.

ELSA  
Good for you. Sign this.

She holds the TABLET out for JAMAAL. He looks at the screen and scrolls a little.

ELSA is staring at him, impatient.

JAMAAL  
You mean now? How do I-?

The TABLET begins to beep insistently. ELSA takes JAMAAL's hand and puts it at the bottom of the TABLET. The tablet chirps, contented.

JAMAAL  
Thank you.

ELSA  
(letting go of his hand)  
Very soft.

JAMAAL  
I moisturize.

ELSA starts to leave.

JAMAAL  
I'm sorry - those were...?

ELSA  
Non-disclosure, non-compete, non- Just non.

JAMAAL  
Oh, OK. Do I... Do I get a copy?

ELSA  
No.

JAMAAL  
Oh. OK. So I should just- Should I wait here?

ELSA  
Sure.

ELSA EXITS down the hallway.

JAMAAL  
OK. Thank you...?

JAMAAL goes back to the couch and sits. He looks at the rock on the table more closely. He tentatively puts his hand out and leans in to touch the rock, but as his finger is about to touch it-

EDGAR (O.S.)

Thank you.

SENATOR KIMBLE (O.S.)

You appreciate that we are in a sensitive position-

EDGAR, SENATOR KIMBLE, MARTY, MINA, and RAJ ENTER. MARTY has a TRENCHCOAT over her arm.

EDGAR

Yes, yes.

SENATOR KIMBLE

The last thing we want to do-

EDGAR

I know.

SENATOR KIMBLE

-is start regulating this. Don't give us a reason to.

MARTY

All of us agree with you, Senator.

SENATOR KIMBLE

Marjorie, my better half, says I should ask you over to the house for dinner.

EDGAR

I appreciate the offer.

MARTY

Your coat, Senator?

SENATOR KIMBLE  
(to MARTY)

Thank you.

(Putting on the TRENCHCOAT, to EDGAR)

I noticed your interest in kinetic art.

(points to the panel on the wall)

The Cantor is doing an exhibition of light sculpture. I'm on the board so-

EDGAR

Oh that. It's not art.

SENATOR KIMBLE

No? Well, we'd still love to see you the next time your are in the city.

MINA

That would be something. Thank you for making the trip, Senator.

SENATOR KIMBLE

Edgar, no one wants this to be unpleasant. But there are serious concerns and there will be tough questions.

EDGAR

Gina, I am looking forward to answering all the committee's questions.

SENATOR KIMBLE

Good. And please, go easy on the rest of them. They don't all understand tech the way I do. The Internet and everything.

EDGAR

I am well aware.

MINA

We'll get your team the data you asked for, Senator.

RAJ holds up a SMALL USB DRIVE.

SENATOR KIMBLE

Thank you. Thank you, Mina. Edgar.

EDGAR

Senator.

MARTY

I'll walk you to the car, Gina.

SENATOR KIMBLE EXITS.

MINA

Marty-?

MARTY

I'm on it.

MINA

Thank you.

MARTY EXITS.

MINA

You shouldn't do that.

EDGAR

She's an idiot. Tell me I'm wrong.

MINA

What's the point of being right if no one likes you?

RAJ

Life is not a popularity contest.

MINA

Politics is literally a popularity contest. She's trying to help us. She came to you first. She didn't have to.

EDGAR

And you think that's what? Helpful? It's a threat. It's a fucking threat. To me, you, all of us.

MINA

You might be personalizing this.

EDGAR

We're the problem? Us? There isn't a single piece of evidence that we are the problem. Totally illogical.

RAJ

Imagine.

EDGAR

And "They don't all understand tech the way I do." Seriously? And why is she the only Democrat on my calendar?

MINA

That's a Marty question.

EDGAR

We're not the problem.

MINA

You don't have to be the one to do this. We can send other people.

EDGAR

I said I was going to do this, so I'm going to do this.

RAJ  
(holding up the SMALL USB DRIVE)  
What do you want me to do with this?

EDGAR  
How about finding out how she got our data?

RAJ  
Yes, sir.

EDGAR  
OK. OK. So. Based on this meeting, where do we think we are?

MINA  
You know, I think it's // not so bad.

RAJ  
We're screwed.

EDGAR  
Really? I think we're doing better than that.

RAJ  
Based on what?

MARTY ENTERS through the front door.

EDGAR  
Marty! How'd we do?

MARTY  
We're fucked.

EDGAR  
Fantastic.

RAJ EXITS down the hallway.

MARTY  
We have to get unfucked by next week.

EDGAR  
Why is she the only Democrat on my calendar?

MARTY  
You're not very popular.

MINA  
Better to be liked.

MARTY  
The Democrats, most of them, are upset that the platform has been- in their opinion- lenient on this administration.

EDGAR

Bullshit. Bullshit bullshit bullshit. What do they expect us to do? Put our thumb in his eye?

MARTY

Frankly, yes that's what the Democrats want, yes.

EDGAR

And what happens to us? I'm responsible for fifty-thousand employees.

EDGAR sits on the couch next to JAMAAL, but doesn't appear to notice him.

MARTY

We need to figure out where she's going with that data.

EDGAR

She's going for our throats.

MINA

I don't think that's really what // she wants.

MARTY

Well we can sit around and guess or I can go find out.

EDGAR

Find out.

MARTY

This may require some more prep time. Depending.

EDGAR

We're already prepping tomorrow morning.

MARTY

I think another day would // make a real difference.

EDGAR

A day? No. Impossible. ELSA!

MINA

This is important-

EDGAR

I don't do unimportant things.

## ELSA ENTERS

EDGAR  
(to ELSA)  
Marty needs an hour.

MARTY  
Half a day-

EDGAR  
An hour and a half-

MARTY  
Before the hearing.

ELSA  
(consulting her TABLET)  
Sunday 7AM, or...

MINA  
Hearing's on Monday.

ELSA  
That's it.

MARTY  
I'll have the team here at 6AM Sunday to set  
up.

MINA's phone rings - A ringtone of  
a song every Gen X person would  
know. She looks at it quickly and  
then turns it off without  
answering.

MINA  
Sorry, I thought it was on silent.

EDGAR  
OK? Anything else?

MINA  
I am doing reviews with HR and then getting an  
update from the photo product team. I'll bring  
the notes over later.

EDGAR  
Good. What about Raj?

ELSA  
You have a call with him at one with DevOps  
about Budapest. And then at two with the UK  
team.

EDGAR  
OK. Thank you all.

ELSA EXITS down the hallway.

MARTY  
Look, I know this is not a lot of fun, we just  
need to make sure-

EDGAR  
I know.

MARTY  
(to MINA)  
I'll get you the hearing schedule, the new  
outline for tomorrow's prep?

MINA  
Thank you.

MARTY EXITS through the front door.

MINA  
You don't like politicians.

EDGAR  
I like them fine until they come to my house  
and tell me that I'm the goddamn problem. Who  
has access to the Middle East engagement data?

MINA  
Lots of people.

RAJ ENTERS with a coat over his arm  
and a small laptop bag.

EDGAR  
Where did that engagement data come from?

RAJ  
It's been like two minutes.

EDGAR  
I want an update at the morning exec tomorrow.

MINA  
(to RAJ)  
You can start with the Behavioral Science  
team. Or maybe Middle East sales?

MINA EXITS out the front door.

RAJ  
(Holding his hand to his ear like  
a phone)  
1 o'clock?

EDGAR  
Can't wait.

RAJ EXITS out the front door.

EDGAR and JAMAAL are alone in the room.

EDGAR  
So... Who are you?

JAMAAL  
Jamaal Warner. Sir. From the lab.

EDGAR  
Which lab?

JAMAAL  
Los Altos.

EDGAR  
You're the coder. Is that today?

JAMAAL  
I was a little early, your assistant // let me in.

EDGAR  
ELSA! She's not my assistant. I don't have an assistant.

ELSA ENTERS.

EDGAR  
Is he all taken care of?

ELSA  
Yes.

EDGAR  
OK - When's our next thing?

ELSA  
You have 15 minutes.

EDGAR  
Thank you.

ELSA EXITS.

EDGAR  
A lot of people in my position have an assistant, so it's a common mistake. Assumption. Mistaken assumption. So...

JAMAAL

Jamaal. Am I in trouble?

EDGAR

Why, what did you do?

JAMAAL

I don't know why I'm here.

EDGAR

Here's a question, Jamaal: What cross-validation technique would you use on a time series data set?

JAMAAL

Forward chaining. Is this an interview?

EDGAR

No. You've done deep learning, transformers, NLP?

JAMAAL

Transformers mostly on my own. Not so much NLP-

EDGAR

How's your machine language? Can you read hex?

JAMAAL

Actually, yes-

EDGAR

I already knew that. Jamaal? Jamaal, last question. Ready? This one is important. OK? What time is it?

JAMAAL

What time?

EDGAR

Yes. Right... now.

JAMAAL looks at him and then at the LED wall.

JAMAAL

It's oh-nine-twelve and... 23 seconds.  
(In rhythm with the LED wall changes)  
and 24. 25. 26... It's a binary clock.

EDGAR

You wrote the dog report. That's why you're here.

JAMAAL

I did. I'm sorry about... or... Am I sorry about that...?

EDGAR

No, I like the dog report. You're working on a project for me now. For the next week or so. It's not a public project, so the security will be different from what you are used to. There will be different tools, different libraries, different hardware. You will work on it only here and only with me. Is that OK?

JAMAAL

I don't have a problem with that.

EDGAR

It was a rhetorical OK. ELSA! Of course you're OK with it. We'll get you set up and you can get started.

JAMAAL

Today? I didn't know- have a code review at // 11:30.

EDGAR

No, you don't.

JAMAAL

But my projects-

EDGAR

Your bullshit projects are now someone else's bullshit projects. Your new project is here. With me.

JAMAAL

Oh. OK. But-

ELSA ENTERS.

EDGAR

But what?

JAMAAL

I'm sorry- I didn't know-

ELSA

He has flu shot today at 2.

JAMAAL

How?- Right- Yes.

ELSA

1:30.

EDGAR

You'll get your flu shot here at 1:30. Don't worry, I get the good stuff.

(to ELSA)

Can someone set him up?

JAMAAL

What am I working on?

EDGAR

You take a look at the code and then you tell me, OK?

(to ELSA)

Is it Brits or Germans next?

ELSA

Riyadh.

EDGAR

Saudis? I'm going to need coffee first. Good to have you on board Jamaal Warner of Los Altos.

JAMAAL

Thank you-

EDGAR EXITS.

ELSA

Follow me please.

JAMAAL follows her.

JAMAAL

Is this always how-

ELSA

Don't talk to me.

JAMAAL

OK.

ELSA and JAMAAL EXIT.

**SCENE 3 THE SECRET COFFEE MACHINE**

ON SCREEN: The LED panel flashes rapidly - It is now 1:17PM.

It is now 1:17PM.

RAJ is standing at the window looking out at the landscape. He holds a coffee mug in his hand.

JAMAAL ENTERS from the hallway, he has a TABLET in his hands and is reading as he walks. He does not notice RAJ. He goes into the kitchenette, picks up a mug, and faces what can only be described as both an extremely simple and yet overly elaborate COFFEE APPARATUS.

JAMAAL tries to figure out how to get coffee from it - waving his hand, touching it, pushing buttons.

The COFFEE APPARATUS lets out a SHRIEK, a BLAST OF STEAM, and then a GROAN.

RAJ

That doesn't sound good.

JAMAAL

No. I don't know how- Do you know how this works?

RAJ

I have no idea. You're the kid from Los Altos?  
I read your puppy report.

JAMAAL

Dog report.

RAJ

Right. Dog. Something about pets?

JAMAAL

A new method of targeting.

JAMAAL has tried some more buttons on the COFFEE APPARATUS and it is making a LOW, GROWLING NOISE.

JAMAAL

For each user, I took images from their photo stream as well as photos and videos they viewed and shared to determine the animals they most closely associate with.

The COFFEE APPARATUS let's out what sounds like an EXTENDED FART and dies.

RAJ  
 (taking the mug from JAMAAL's  
 hand)

Image processing.

JAMAAL

I trained a library to recognize the animals.  
 Then I used a confusion matrix to generate  
 correlations- Then-

RAJ pushes on a panel in the  
 kitchen wall. A door pops open with  
 a very simple office-style coffee  
 machine behind it.

JAMAAL (CONT'D)

Oh! So then I took the-

RAJ opens a drawer full of K-cups.

JAMAAL (CONT'D)

(pulling out a K-cup and making a  
 cup of coffee)

Thanks. Then I took the multidimensional  
 vectors from the profiles and ran them through  
 K-means clustering and- let's just say a bunch  
 of stuff.

RAJ

Is that the technical term?

While JAMAAL's back is turned RAJ  
 picks up JAMAAL's TABLET and  
 scrolls through what he's been  
 reading.

JAMAAL

It was a lot of stuff. And basically came up  
 with a predictor of the kind of animal people  
 actually wanted. As opposed to what they had  
 or claimed to want. So even if they had a dog,  
 but really wanted a cat, we'd know.

RAJ

Who would want a cat?

JAMAAL

I don't know.

RAJ

Do they do this kind of thing a lot at Los  
 Altos?

JAMAAL

No. No they don't. I did it on my own time.

RAJ  
I know you did. But why?

JAMAAL  
To see if I could do it?

RAJ  
Well, it got his attention. Which is not always a good thing, but in this case it's a good thing.

JAMAAL turns and sees RAJ looking through his TABLET. He isn't sure what to do about it.

JAMAAL  
Do you want some? Coffee?

RAJ  
(looks at his watch)  
Is there a donut shop one in there?

JAMAAL takes RAJ's mug and makes him a cup of coffee.

RAJ  
What made you think of animals?

JAMAAL  
My dog. My family has always had dogs- my parents. Do you have one?

RAJ  
A dog? No. I have a herd of Tibetan white yaks. 50 head. I own about 75 acres up near La Honda.

JAMAAL  
Oh.  
(holding out the coffee cup)  
Here you go, sir.

RAJ puts the TABLET back on the counter as JAMAAL hands him his coffee.

RAJ  
You can call me Raj.

JAMAAL  
Jamaal.

RAJ  
(referring to the TABLET)  
Does any of that make any sense to you, Jamaal?

JAMAAL

I've really just started.

RAJ

You're going to see and hear a lot of things here. I suppose I don't have to tell you that you shouldn't talk // about any of this-

JAMAAL

You don't.

RAJ

Good. If you need any... clarification, you let me know. OK? Has he shown you anything else?

JAMAAL

No more than this.

RAJ

Well, keep me posted. I have to make sure his big ideas don't cripple our infrastructure. Those servers don't provision themselves.

JAMAAL

Actually, I think they do.

RAJ

I think you're right, but don't tell anyone.  
(Pointing at the small coffee machine)  
And I wouldn't mention the... Just in case.

ELSA ENTERS

ELSA

He's ready for you.

RAJ EXITS.

ELSA reaches over and closes the secret coffee cupboard door.

JAMAAL

Sorry, Raj showed me the coffee machine so-

ELSA

What coffee machine?

JAMAAL

(flatly)

Nothing. No coffee.

ELSA

You. Flu shot. Medical Unit.

JAMAAL

Yes. Thank you. M'am.

ELSA EXITS. MINA and MARTY ENTER through the front door. MARTY is carrying a stack of binders, MINA has a stylish leather tote over her shoulder.

JAMAAL

Wait, where's the... medical unit?

MARTY

(to JAMAAL)

Did you hurt yourself?

JAMAAL

What? No, I-

MINA

The medical unit is across the courtyard.

MARTY

The building with the headstones in front of it.

MINA

(offering her hand)

I'm Mina.

JAMAAL

I know who you are, m'am. Sorry, I'm // Jamaal.

MINA

You're the coder from Los Altos.

MARTY

(Shaking JAMAAL's hand)

Marty Klein. VP Global Public Policy?

JAMAAL

Good to meet you.

MARTY

How come nobody knows who I am?

MINA

You need to spend more time here and less in DC.

MARTY

That's a terrible idea.

(to JAMAAL)

Well, it's almost 2 and you're still here. So that's a good sign.

JAMAAL

Is it?

MARTY

Sure. No. Who knows? Ha!

MINA

I'm sure he's doing fine. Did you get the new disclosure paperwork?

JAMAAL

Yes. His assistant gave them // to me-

MINA

Just so you know, she's not his assistant.

JAMAAL

Right. He said. Sorry.

MARTY

Hey, tell me. What did the forms say?

JAMAAL

I'm sorry. I didn't read them.

MARTY

You're going to fit right in around here.

ELSA ENTERS

MARTY (CONT'D)

(to ELSA)

Ah! Here you go, for tomorrow's prep.

MARTY hands the binders to ELSA and gives one to MINA.

ELSA

Thank you.

JAMAAL

I'm late for my flu shot. Nice to meet you.

ELSA turns and EXITS down the hallway.

MINA

(MINA sees JAMAAL's TABLET on the counter.)

Hey Jamaal? Quick tip: Don't leave your things around. I know it's his house, but there are still a lot of people coming and going.

JAMAAL

Right. Sorry. OK. Thanks.

MINA  
(Handing him the TABLET)  
Has he told you what you're working on yet?

JAMAAL  
(Is this a test?)  
No.

MINA  
If you need anything, you let me know, OK?

JAMAAL nods and EXITS.

MARTY  
Here you go.

MINA's phone lets out a 'BING.'

MINA  
Thanks, but I don't think...

MARTY  
If you need it, you have it. You remember  
what's-her-name? Worked for NSA? You know, she  
had the...

MINA  
Susan? I didn't know she was married.

MARTY  
NSA. Very discreet. Anyway, she got Susan both  
houses and full custody. He really took the  
kids?

MINA  
It's not like that.

MARTY  
You came home and they were gone.

MINA  
They're at the beach house.

MARTY  
That's taking the kids.

MINA  
It's taking a break.

MARTY  
With the kids.

MINA  
Yes, Marty. With the kids. Look, I really  
don't think-

MARTY

Hey Mina, put your big girl pants on. I mean, reality check, OK? Is he talking to his attorney?

MINA

I'll call her.

MARTY

Yes you will. I'm sorry, by the way. I mean, for what it's worth.

RAJ ENTERS from the hallway.

MINA

(looking at her watch)

Don't you have a one-o'clock?

RAJ

It's not one-o'clock Edgar time, apparently.

MINA

Of course. Any progress on the data leak?

RAJ

The data came from a report on the company wiki. I have someone auditing the log file, but hundreds of people have access.

MINA

(to MARTY)

OK, so how will she use it?

MARTY

Well, what kind of story does the data tell? I mean, it's either "we have a super-fun feature for sharing stories" or "we have an entire continent's Internet access in a chokehold".

(MINA and RAJ stare at her.)

Definitely the fun one. Probably.

MINA

Sounds like we all have work to do.

MARTY

See you tomorrow.

MARTY EXITS out the front door.

RAJ

(Looking at the video screen)

He has the biggest fucking clock in the world.

RAJ EXITS back down the hall. MINA goes to the couch and picks up a THROW PILLOW. She holds it over her face and screams into it. Twice. She puts the THROW PILLOW down and starts looking through her briefcase.

**SCENE 4 BABBAGE, LOVELACE, AND TURING**

ON SCREEN: Photo of Babbages Difference Engine

RAJ ENTERS dressed as an early 19th Century London gentleman.

SENATOR KIMBLE

The first computer. Some people say it's Charles Babbage in the 1830s and his Difference Engine. But it's just a big mechanical calculator. So... Sorry.

ON SCREEN: Photo of Babbages Analytical Engine

SENATOR KIMBLE (CONT'D)

Babbage also proposed a machine called an Analytical Engine, which was closer to the mark. But he never built it. So... too bad.

RAJ EXITS, stalking off. ELSA is seated at a writing desk, writing on a piece of paper with pen and ink. She wears a dress appropriate for an early 19th Century London aristocrat.

SENATOR KIMBLE (CONT'D)

In 1843, Babbage hires a young woman to translate an article written in Italian about his Analytical Engine. And to this translation, she adds a few notes. A lot of notes, actually. The notes are three times the length of the article. Augusta Ada King, Countess of Lovelace. More commonly known as Ada Lovelace. She is the only legitimate child of Lord Byron and a gifted mathematician. In her notes, she proposes a method to instruct the Analytical Engine to calculate a sequence of numbers. What she describes is a computer program: Giving the machine a set of logical instructions which it could follow to produce a result. The machine doesn't exist, and her method is never realized, but she is, most likely, the first person to try to program a computer. At the time she is 28 years old.

JAMAAL ENTERS dressed in a shirt, tie and a sweater vest; a very 1930's university look. JAMAAL sits across from ELSA. ELSA hands the paper and the pen to JAMAAL.

SENATOR KIMBLE (CONT'D)

100 years later, 1936 common era, still in England. A young student publishes a paper called "On Computable Numbers"

JAMAAL

"with an Application to the  
Entscheidungsproblem"

SENATOR KIMBLE

God bless you. In his proof, he describes something he calls an "automatic machine". This machine manipulates symbols on a strip tape following a set of rules.

JAMAAL

The machine is supplied with a "tape " (the analogue of paper) running through it, and divided into sections (called "squares") each capable of bearing a "symbol".

SENATOR KIMBLE

He proves that this machine, essentially a computer, which, again, does not exist, could receive and interpret symbols according to logic. He and Ada are communicating, building on each other's ideas. This student is Alan Turing. He will go on to help crack the Enigma and later the Lorenz code of the Nazi High Command giving the Allies the upper hand in World War Two - we've all seen the movie.

ON SCREEN: Images of Hut 8, Bletchley Park. D-Day. Victory in WWII.

ENTER MARTY dressed as a 1930's  
Princeton professor.

SENATOR KIMBLE (CONT'D)

His work also caught the attention of John von Neumann. von Neumann is hanging around Princeton University with lightweights like Albert Einstein. In 1937, Turing spends a year at Princeton with von Neumann on a fellowship. von Neumann later references several of Turing's ideas in his own work which leads to his seminal paper on computer architecture, concepts that to this day are known as the von Neumann architecture.

ELSA

Can your machines think?

JAMAAL

Sorry?

ELSA

Can your machines think?

MARTY

Depends on what you mean by 'machine' and 'think.' Can your machine think?

ELSA

Oh, no. No. It can only do whatever we tell it to do. It can never do anything new.

SENATOR KIMBLE

In 1950, Turing publishes "Computing machinery and intelligence" the paper in which he proposes his famous 'Imitation Game' - also known as the 'Turing Test' - where a person asks questions of an unknown party through a teletype system and must determine if they are a person, or a machine. In this paper he addresses Ada Lovelace directly.

JAMAAL

"It can never do anything new." A better variant of Lady Lovelace's objection says that a machine can never 'take us by surprise'. Machines take me by surprise with great frequency. This is largely because I do not do sufficient calculation to decide what to expect them to do, or rather because, although I do a calculation, I do it in a hurried, slipshod fashion, taking risks... Naturally I am often wrong, and the result is a surprise for me.

SENATOR KIMBLE

It would be nice to know where these surprises would have led him. He was a homosexual and in 1952 he was convicted of indecency, put on a course of female hormone therapy, and two years later he died, 16 days from his 42nd birthday. A man who, in 1936, at 24 years old, published "On Computable Numbers",

JAMAAL

"with an Application to the Entscheidungsproblem"

SENATOR KIMBLE

Yes, that. Ada, Alan. The two of them, 100 years apart, started a slow burn, a creeping chain reaction that within 50 years would bring us into our digital future. While Turing spent the war years decoding Nazi messages, von Neumann used his skills on another secret project, and the computers he designed were used well into the early 1950s to perform critical engineering calculations.

MARTY

At Los Alamos.

ON SCREEN: Footage of a hydrogen bomb exploding.

SENATOR KIMBLE

Thanks to his work, the US developed the hydrogen bomb. And the world passed from the atomic age to the thermonuclear age.

MARTY

From kilotons to megatons.

SENATOR KIMBLE

When the h-bomb is tested on a small island in the Pacific, the whole island is vaporized.

MARTY

Left a crater in the ocean 1 mile wide and fifteen stories deep.

JAMAAL

It cuts both ways, doesn't it?

MARTY

Yes.

SENATOR KIMBLE

Yes. It always does.

**SCENE 5 YOU CAN SEE IT FROM SPACE**

ON SCREEN:The LED panel flashes rapidly - It is now 7:23AM.

The next morning, Saturday, 7:23AM. On the counter in the kitchenette is a tray with pastries and a tub with water bottles on ice.

MINA ENTERS from the hallway carrying a tablet and a tote bag. She is dressed in yoga/workout wear. She grabs a bottle of water, pulls a pill case from her purse and swallows 2 of the pills. She considers the pills in the case, then takes a third one out.

EDGAR, RAJ, and MARTY ENTER from the hallway.

EDGAR

Am I wrong? Just tell me that I am wrong.

MARTY

You're not right.

EDGAR

I am not trying to be difficult.

RAJ

It just comes naturally.

MARTY

Why are you here?

RAJ

To be helpful.

MINA takes the third pill.

MINA

(Swallowing)

Whether you are right or wrong is...immaterial.

EDGAR

Immaterial!?

MINA

Immaterial.

MARTY

If you walk into a Senate committee hearing and tell them that the Senate is a sham and you don't recognize their authority? That would be- be-

RAJ  
Inadvisable?

MARTY  
Thank you, inadvisable.

RAJ  
See, I'm helpful.

EDGAR  
The founders did not envision a group of  
Harvard and Yale twits-

MARTY  
No no no! I won't debate the founders with  
you! What is it with you? You ignore  
everything // I say-

EDGAR  
I do not // ignore everything.

EDGAR  
I ignore the stupid stuff.  
Who wears suits on Saturday?

MARTY  
You do too. Is it the suit?  
Seriously?

EDGAR  
Nobody!

MARTY  
Everybody!

MINA  
OK, everyone. Everyone. HEY! We're going to  
pause.

EDGAR  
I'm still right.

MINA  
Pause. OK? Pause. Marty? Raj? Please. Pause.

MARTY EXITS down the hallway. RAJ  
defiantly grabs a water bottle and  
then a pastry and then EXITS down  
the hallway.

EDGAR  
I'm not wrong.

MINA  
No one is saying you're wrong.

EDGAR  
Are you sure? It seems like people are  
disagreeing with me.

MINA  
She's not saying you're wrong. She's just  
saying you shouldn't say that. Out loud. To a  
group of senators. At the Capitol.

EDGAR

Am I being "overbearing?" "Stubborn?" "Single-minded?"

MINA

Are you reading articles again?

EDGAR

No. A few. Yes.

MINA

How can I help?

(MINA's phone buzzes)

MINA (CONT'D)

Shit. Sorry. I'm- I have things going on.

EDGAR

Yeah, I have a few things going on too. Maybe you haven't noticed the subpoenas piling up around here. Not to mention data that seems to wander off on its own-

MINA

I get it, OK? I get it. Let's just skip this part-

EDGAR

Skip it?

MINA

You're anxious. You have a lot of good reasons to be anxious. Any smart person would be in this situation - and as you are an exceedingly smart person-

EDGAR

I am.

MINA

There you go. Look. You are pushing people away from you. Do you know that? It's what you do when you get anxious. So let's just take a minute and reset. OK? Reset. Have a water.

EDGAR

I'm not thirsty.

MINA

Fine. So because you are such an exceedingly smart person-

EDGAR

Why do you say it like that? "Exceedingly smart person?" It's starting to sound condescending.

MINA

Seriously? Seriously. You're pushing me away now too? Well, why not? Join the club.

MINA opens the water bottle, takes a drink, closes it. MINA's phone buzzes again. She throws the water bottle across the room.

EDGAR

OK, now I'm getting a little anxious.

MINA

It's been a long week.

EDGAR goes and gets a water bottle from the counter and drinks from it.

MINA (CONT'D)

I'm fine. The point is: I know you don't like politicians, or the law or, basically, authority figures of any kind.

EDGAR

(pointing at the rock on the table)

Do you know what that is?

MINA

You're changing the subject.

EDGAR

I'm not.

MINA

It's your... whatever. Space rock?

EDGAR

The Kuzmyn Meteorite.

MINA

Yes, I get it, it's impressive. Most people have a book, or coasters. You have a space rock. It shows people you are operating on a totally different level. That's not what I'm talking about.

EDGAR

What does it look like to you? Not a trick question. What do you see?

MINA

A rock. A big, dumb, grey rock.

EDGAR

Like what? A piece of ordinary concrete?

MINA

Yes.

EDGAR

My parents had a three-bedroom single-level ranch house on a quarter acre. Whole neighborhood was the same. House after house after house. The town where I grew up. Mason, Michigan.

MINA

Mason? Where the treatment plant-?

EDGAR

Yes.

MINA

We built that sewage treatment plant.

EDGAR

My gift to the state of Michigan.

MINA

Right after we went public.

EDGAR

I bought every house in that neighborhood. The whole thing. Took 5 years. Fifty acres of shit houses on shit land. And then I bulldozed the place, and built-

MINA

That was where you grew up- literally, right there? You didn't tell me?

EDGAR

I built the biggest shit tank in the world. You can see it from space. And yes, it generates thirty thousand gallons of reclaimed water an hour. And yes, I revolutionized enzymatic processing of sewage. But this. This is what I wanted. This the last piece of that three-bedroom single-level ranch house. From the foundation. I don't dislike authority. I don't recognize authority. And it's not arrogance, or ambition or greed. I just don't accept that there is anyone or anything that can dictate what I can and cannot do. And this, this is the proof.

EDGAR hands the rock to MINA.

MINA

This is... your parents...? What the hell did they do to you?

EDGAR

It doesn't matter. I won.

MINA

Wait- So you don't own a space rock?

EDGAR

No, I do. It turns out the real one is so radioactive it will make your dick fall off.

MINA puts the rock back on its stand.

MINA

We are making the world a better place. That's why I'm here. That's why I've always been here. We have made amazing things possible. I want to keep doing that. And to do that, you have to...

EDGAR

-listen to Marty. I know. Marty is still new. To me.

MINA

She was chief of staff for three congressmen, two senators, and deputy chief of staff for-

EDGAR

Is she really one of us?

MINA

What are you working on?

EDGAR

I'll fill you in. Later.

MINA

You'll fill me in first?

MINA's CELLPHONE buzzes - EDGAR DUCKS as if she's going to throw something.

MINA

Ha ha.

(looking at her phone)

Oh shit. Do you mind-?

(MORE)

MINA (CONT'D)

(EDGAR nods and she answers her phone)

This is Mina. Yes? No. No No No. OK. Yes, I can. Hang on.

(to EDGAR, looking confused)

It's Tim. At Apple?

(EDGAR shakes his head, he doesn't know what it's about either.)

I'm going to take this with Raj and let you and Marty talk. I think we're getting in the way.

(to the phone)

Yes. Hang on.

(to EDGAR)

And by we, I mean Raj.

EDGAR

I was going to say...

MINA

(to phone)

OK, you can patch me in. Thanks. Tim, Hi! This is Mina. I know, at Aspen last year. Those were good - the best! What can I do for you? Huh. OK, I see. OK. No, this is a good time. Let me just grab Raj, OK?

MINA EXITS down the hallway. There is a pause, and then MARTY ENTERS from the hallway.

EDGAR

You want some water?

MARTY

I'm sorry if I've overstepped-

EDGAR

You're doing your job.

MARTY

I don't have to prove myself to you, do I? Because I'll do that if that's what I need to do.

EDGAR

I just don't want to do this hearing.

MARTY

Do you want me to get you out of it?

EDGAR

Can you do that?

MARTY

Realistically, no. But we could send Mina.

EDGAR

I said I'll do it, so I'll do it.

MARTY

In DC, the two sides- It's bad. Right now, the only thing they hate more than each other is-

EDGAR

Me.

MARTY

You? Maybe. Your platform, yes. Our platform. And the other platforms, definitely. So they hate you-

EDGAR

This is a shitty pep talk.

MARTY

-but it's all based on... let's call it unclear thinking. Not on facts. Not really.

EDGAR

Kimble seemed to have some facts.

MARTY

I'm working on that. My point is, they don't have facts, and they certainly don't have any solutions. They just want to score some points. I just need you to stay calm, make sure you under-

EDGAR

(they've been through this)

-understand the question, repeat it back.

MARTY

Right, and then just answer the fucking questions- even the stupid ones- especially the stupid ones- clear, calm, authoritative. Right? They are trying to get you to lose your shit. What ever you do, don't lose it. If you lose it, they win.

EDGAR

I never lose it. What?

MARTY

Everything in tech is fast. Fast fast fast. In Washington, it's all slow. Very very slow.

(MORE)

MARTY (CONT'D)

My job is to make sure that when you walk into that committee chamber, you are well prepared. That you can see fastballs, the trick pitches, and basically know their game enough to be dangerous.

EDGAR

Not dangerous. Lethal. Can you make me lethal?

MARTY

Can you give me more than an hour on Monday?

EDGAR

I can get up early.

MARTY

Then, yes. I can do that.

EDGAR

I see how you did that.

MARTY

I'm pretty good, right?

The front door opens and JAMAAL  
ENTERS looking a little flustered.

JAMAAL

Am I late? Elsa called-

EDGAR

Late for what?

JAMAAL

I didn't know we worked on Saturdays.

EDGAR

The work never stops, kiddo.

RAJ ENTERS

RAJ

Edgar, we need you. It's Apple.

EDGAR

(to JAMAAL)

Oh. It's Apple.

(to MARTY)

It's Apple.

RAJ

No really. We need you.

EDGAR

OK.

EDGAR and RAJ EXIT.

JAMAAL

Is it always like this?

MARTY

(typing on her phone)

Do you feel disoriented, dizzy, heart's a little racy?

JAMAAL

I'm a little nauseous, actually.

MARTY

(pulling out her phone and tapping the screen)

You're close to the mountain top. The air is very thin. You'll get used to it.

JAMAAL

Thanks.

MARTY

Or not.

(into phone)

Cheryl? I got us another hour. Get the team together at the hotel and I'll be there in 30 minutes.

MARTY EXITS out the front door.

JAMAAL EXITS down the hall.

**SCENE 6 LET'S JUST SAY 'BAD.'**

ON SCREEN - The clock moves forward to 1:15PM

It is now Saturday at 1:15PM. EDGAR, MINA, ELSA and RAJ are in the living room. MINA's cell phone is on the coffee table acting as a speakerphone. EDGAR and MINA are both holding lengthy documents and there are other documents spread around the room.

EDGAR

Let's back up. Can I get a basic definition?

MINA

Of what?

EDGAR

Of what they're accusing us of.

RAJ

You don't know what human trafficking is?

FARIDA (on Speakerphone)

Sir, human trafficking is transporting or coercing people to-

EDGAR

I know what human trafficking is. How are they saying we're responsible for that?

MINA

It's advertisers. The agencies- or people posing as recruiting agencies-

RAJ

Sometimes actual recruiting agencies.

MINA

Sometimes yes- using our platform to advertise positions, make contact with their victims.

EDGAR

How is that our fault? I mean, 3 guys meet at a coffee shop and decide to commit a crime. Is the coffee shop at fault?

ELSA

If the coffee shop had complete transcripts of their conversations, and they meet there over and over and keep committing the same crimes then one could argue that perhaps the coffee shop didn't do enough to prevent-

EDGAR

I get it.

ELSA

Your metaphor.

EDGAR

Bullshit - Raj! It's the nazi thing all over again. Raj? Raj!

RAJ

Yeah, well. We took steps.

EDGAR

Do you think you've taken enough steps?

RAJ

Obviously not. No.

EDGAR

Apple seems to agree with you. So can we fix this before they yank us off the App Store? The App store? I mean, since 80% of our users are on mobile, can we at least all agree that that would be bad?

MINA

Catastrophic.

ELSA

Apocalyptic.

RAJ

The end times.

EDGAR

Yes, bad. Let's just say 'bad.'

RAJ

Noor, we pulled down that trafficking network last Fall. What was the result of that purge?

NOOR (on Speakerphone)

We disabled uh... 475 accounts with thirty pages and two hundred and twenty-six thousand followers. We are still up on those keywords, but they... changed keywords, phrases - the information Apple gave us looks correct, sir.

RAJ

Are we pulling those accounts down?

NOOR

Yes, sir.

EDGAR

It's the same people? The same fucking people? You know what? That's it. How tightly can we scope this- geographically?

RAJ

I mean... We could get it down to the country.

MINA

Don't you think we should bring Marty into this?

EDGAR

Marty's got plenty on her plate.

RAJ

(to Noor)

If we use the switches from the MAREA cable at Marmaris and Abu Talat-

EDGAR

(to RAJ)

You know what we need to do - technically?

RAJ

Yes, I can coordinate with the Ops Center in Qatar.

MINA

Farida?

EDGAR

(to RAJ)

No, I need you there. You need to go stay on top of this.

RAJ

OK.

MINA

Farida? How many recruiting accounts do we have in this region?

EDGAR

I don't care.

FARIDA

I would have to check-

MINA

Guess, please.

FARIDA

Recruiting agencies? Like maybe 10,000?

MINA

Just to get this in perspective. If we have 500 bad actors and 9,500 legitimate businesses, we're talking about a 5% defect rate.

ELSA

Litigation risk.

MINA

This isn't even a real solution, it's just driving it somewhere else.

EDGAR

Shut them all down. We are exiting the recruiting space in all of these countries.

MINA

I think Marty would want to weigh in-

ELSA

He's right. It's safer than targeting - Take them all out, you're not discriminating.

MINA

Hang on. These are advertisers. Advertisers. Advertising is how we keep the fucking lights on-

EDGAR

Ok, well. You know what? You tell me, OK? You tell me what percentage of human trafficking you are OK with? 6%? 8%? What's the acceptable defect rate here, Mina? OK? Settled. I think we're done here. Thank you all.

EDGAR hangs up the speakerphone.  
MINA is staring at EDGAR.

EDGAR

What?

MINA

I'm sorry. I shouldn't have assumed- I didn't think you would-

EDGAR

You know what, I don't. I really don't. But it's the App Store. The App fucking Store. So you tell me: How you are going to explain to Apple that 5% human trafficking is bad but 4% is just fine?

RAJ

I don't think she was saying-

EDGAR

AND WHY ARE YOU STILL HERE?!

RAJ  
 (grabbing his things)  
 I have a plane to catch. Obviously.

EDGAR  
 THANK YOU!

RAJ EXITS out the front door.

MINA  
 You didn't have to do that.

EDGAR  
 Apparently I did.

MINA  
 (to Elsa)  
 I'll have legal draft a response to Apple-

EDGAR  
 You know what's not fair? When one of your partners- partners! - puts a gun in your mouth and says "Hey! You better fix this intractable, complex, and heinous social issue or I'm going to put you down." That's not fair. We are NOT guilty of human trafficking. Fuck Apple for even suggesting that. But no! I'm somehow responsible? You know what? Have legal write this: Fuck you, you disgusting piece of human filth for even suggesting we are part of that. I mean, whose fucking phones do you think these people are using, Tim?

MINA  
 (to ELSA)  
 I'll get the draft over by three?

EDGAR  
 Less than three percent. The acceptable defect rate. We can't get to zero, but tell them we are targeting a defect rate of less than three percent.

ELSA  
 We can get down to three percent?

EDGAR  
 I am saying three percent. It will be three percent.

MINA  
 OK.

EDGAR  
(to ELSA)  
Whatever my next thing is, push it.

ELSA  
OK, but-

EDGAR  
Push it.

EDGAR EXITS down the hall.

MINA and ELSA stand looking at each other.

ELSA  
Is everything OK?

MINA  
Yes.  
(pause)  
Why do you ask?

ELSA  
You gave in very quickly.

MINA  
Did I?

ELSA  
For you.

MINA  
Maybe it's just the right thing to do.

ELSA  
Can I ask- What's going on at home with John?

MINA  
(Realizing how she knows)  
Marty?

ELSA  
She says he took the children?

MINA  
That's inaccurate. She shouldn't be talking about-

ELSA  
OK. Just- You'll let me know if there is anything I can... help with?

MINA  
Of course. Thank you.

ELSA  
Mina? I was sorry to hear it.

MINA  
Me too.

MINA EXITS out the front door.  
EDGAR ENTERS from the hallway.

EDGAR  
What is it? About John?

ELSA  
He moved out. Took the boys.

EDGAR  
Shit.

ELSA  
Do you want me to work on... options?

EDGAR  
God, no! I don't want to be anywhere near- no.  
She'll work it out.

ELSA  
OK. Is there anything else?

EDGAR  
Yeah. You and me. Should we get married?

ELSA  
Us? Why?

EDGAR  
I don't know. Taxes?

EDGAR takes ELSA's hand.

ELSA  
Do you think I'd testify against you?

EDGAR  
No. No. Would you?

ELSA  
I think we're OK the way we are.

EDGAR  
Keep it professional.

ELSA  
Exactly.

EDGAR  
You must driven them crazy at Harvard.

ELSA  
It was Yale.

EDGAR  
Same thing.

ELSA  
You have two new briefing books to get  
through-

EDGAR  
Yeah, OK. Elsa? Thanks for... Thanks.

ELSA  
(Holding Edgars face gently in  
her hands.)  
Just fix it.

EDGAR  
Right.

**SCENE 7 THE GAME OF LIFE**

JAMAAL

Can a computer teach us what it means to exist?

RAJ

Birth. Life. Death. Strip it down to it's most basic elements, and that's what you have. The Game of Life.

ON SCREEN: 1980's Ad for Milton Bradley's board game Life

RAJ (CONT'D)

Not that one.

ON SCREEN: The patterns of the Game of Life

JAMAAL

This one. This is the Game of Life, created by British mathematician Dr. John Conway. Inspired by the work on self-replicating systems by John von Neumann - yes, that one - Dr. Conway creates his Game of Life in 1968. So what is it?

ON SCREEN: As RAJ describes the Game of Life, the LED screen illustrates what he describes.

RAJ

The Game of Life is a zero-player game. Zero players? It's a simulation. Here's how we start: imagine a 2-dimensional grid where the length and width extend off into infinity. Now imagine that each square on the grid or "cell" is a little one-celled organism. A cell can be born, stay alive, or die depending on three simple rules.

JAMAAL

Number one: Any dead cell with three alive neighbors will come to life. Be born. There's room in the community to thrive.

RAJ

Number two: Any alive cell with two or three alive neighbors will stay alive. A community in balance.

JAMAAL

And number three: Any alive cell with more than three neighbors or less than two neighbors dies. The community is overcrowded and resources are scarce.

RAJ

You put some cells in patterns on the grid and then let it run. See how it evolves? At each moment in time each cell is checked against the rules and it's fate is determined: Birth, life, death.

JAMAAL

The Game of Life first appears in the October issue of Scientific American in 1970. At the time, Dr. Conway thinks that no pattern can grow indefinitely. That they all eventually come to an end.

RAJ

He was so sure that in the article he puts up a prize for anyone who could prove him wrong by the end of 1970.

JAMAAL

Fifty dollars!

RAJ

The prize was won the next month by a team from MIT.

JAMAAL

Turns out, you can build lots of different models that that will go on forever. And all kinds of shapes that behave in curious ways. Blinkers, Gliders. Pulsars.

RAJ

The Game of Life is a simple simulation, but don't let its simplicity fool you. It can be used to demonstrate advanced ideas like Emergence and Self-Organization. Philosophers use it to explain consciousness and free will. Physicists to study phase transitions and non-equilibrium dynamics.

JAMAAL

Three simple rules, but apply them over and over again and you will see worlds born, empires rise, and galaxies collapse.

RAJ

Do you know what that's called? A series of specific instructions used to calculate something?

JAMAAL

It's called an algorithm.

**SCENE 8 WHAT YOU DID, BUT THE OPPOSITE AND FOR  
EVERYTHING.**

ON SCREEN: Binary clock moves ahead to 9:30AM

It is now Sunday at 9:30AM. EDGAR, MINA and ELSA are seated around the coffee table. MINA hands documents to ELSA, who hands them to EDGAR who signs them and hands them back to MINA. MINA's cellphone is on the table acting as a speakerphone.

EDGAR  
(to cellphone)  
Almost done, Tim. Raj, do you have the  
documentation?

RAJ (ON PHONE)  
We're sending it over now.

EDGAR  
OK, let me know when you've got it, Tim.

JAMAAL ENTERS from the hallway  
carrying his LAPTOP.

JAMAAL  
Oh, sorry.

EDGAR  
Tim, Jamaal, one of our top code jockeys just  
came in.

TIM (ON PHONE)  
Nice to meet you Jamaal.

EDGAR  
Jamaal, this is Tim. From Apple.

JAMAAL  
Uh, hello. Sir. Hi.

TIM (ON PHONE)  
Edgar, we received the files and the team here  
will go through them.

EDGAR  
So are we good?

TIM (ON PHONE)  
(to someone else)  
Are we good?  
(pause)  
We're good here.

EDGAR  
Raj, when is your flight back?

RAJ (ON PHONE)

When I'm done here I'm going to the Kingdom  
and then coming back on Wednesday.

EDGAR

Wednesday?

RAJ (ON PHONE)

It's a fifteen hour flight.

EDGAR

(signing the last of the  
documents)

I wish I had that kind of free time.

ELSA

(to EDGAR)

OK, we're done.

EDGAR

OK Tim, we're good here.

MINA

Tim, we'll send these over for counter-  
signature?

TIM (ON PHONE)

I appreciate your personal attention in this  
important issue.

EDGAR

(making a masturbatory gesture)

Well, we appreciate your continued support for  
our platform.

TIM (ON PHONE)

Goodbye Edgar.

EDGAR

Thanks Tim.

MINA hangs up the phone.

ELSA

(to MINA)

You've got this?

MINA

There's a messenger waiting to take these over  
to Apple.

ELSA

Wet signatures only. One for them, one for us-

MINA  
-and one for you. They know.

JAMAAL  
(to EDGAR)  
Apple? The Tim at Apple?

EDGAR  
Yes, we've reached an agreement with the  
Cupertino fruit farm.

MINA  
We'll need something for the press release.

EDGAR  
No, No, No. This never happened.

MINA  
Fine. Never happened. Have you read the new  
briefing books-

EDGAR  
I have...

MINA  
-or have you forgotten about the committee  
hearing?

EDGAR  
...forgotten.

MINA  
Monday...

EDGAR  
Thank you.

MINA EXITS out the front door.

EDGAR  
(to JAMAAL)  
And what do you need?

JAMAAL  
It's nothing. I can // come back later.

EDGAR  
No, no. I have time. Don't I have time?

ELSA  
Technically no, but... sure, go ahead.

ELSA EXITS.

EDGAR  
She must like you.

JAMAAL  
Who could tell?

EDGAR  
What have you got?

JAMAAL  
(showing him the LAPTOP screen)  
This library here. It's fully compiled so I  
can't read it, but it's called a bunch of  
times and it keeps failing.

EDGAR  
(Taking the laptop and looking at  
the code)  
Hmmm...

JAMAAL  
So... She's not your assistant?

EDGAR  
I don't have an assistant.

JAMAAL  
So what does she do?

Pause.

EDGAR  
She's my attorney.

JAMAAL  
Are you putting me on?

EDGAR  
No.

JAMAAL  
Because you took a while to answer.

EDGAR  
I was deciding if I was going to put you on. I  
decided not to.

JAMAAL  
So she's like the lawyer for the company?

EDGAR  
No. She's my attorney. Mine. She looks out for  
me.

JAMAAL

And she lives with you?

EDGAR

Yes. I have a live-in attorney.

JAMAAL

And you two...? I mean, I see things.

EDGAR

You don't do that with your attorney?

JAMAAL

I don't have an attorney.

EDGAR

Well, someday, when you get one, I suggest you get one like her.

JAMAAL

She's a good lawyer?

EDGAR

She's Roy Cohn in a pencil skirt. In a good way. Have you figured out what this is yet?

JAMAAL

Oh, I think so, yes.

(EDGAR pauses his typing and looks at JAMAAL.)

It's a new algorithm. I mean, not totally new, but a new construct.

EDGAR

Is that what you think?

JAMAAL

Yes.

EDGAR

(returning to typing)

Why do you think that?

JAMAAL

The structure. The shape of it. This object, here, is built for speed, efficiency. You intend this to scale. Massively.

EDGAR

I do.

JAMAAL

So I'm right?

EDGAR

Day 3, huh?

JAMAAL

I'm not sure why you need me. All this code is already written. Am I supposed to fix it?

EDGAR

(handing the LAPTOP back to  
JAMAAL)

You haven't gotten to the hard part yet.

JAMAAL

What's the hard part?

EDGAR

OK. We're going to build a transformer for all the user personalization data, in fact all personal data. For all the users- however many billion of them. And then we'll use that massive transformer to predict their patterns and give them what they actually want before they even know themselves. In real time.

JAMAAL

Huh. OK. Well, I did that.

EDGAR

Did what?

JAMAAL

(Typing)

Yeah, I already did that. Here. See, this construct's a transformer that associates the user personalization data- there's a lot so I had to re-dimensionalize it all into this whole multi-dimensional vector array based on their actual preferences-

EDGAR

As opposed to their stated-

JAMAAL

Exactly. Anyway, it's done. The code is anyway.

(EDGAR takes the LAPTOP back and  
looks through the code)

Is that the hard part? Edgar?

EDGAR

Why did you do this?

JAMAAL

To see if I could. I mean, based on the code I thought that's what you'd want me to do. Why else would you bring me here?

EDGAR  
But how- How did you-?

JAMAAL  
It's basically what I did for the Dog Report.

EDGAR  
Except it's the opposite and-

JAMAAL  
For everything.

EDGAR  
Does it work?

JAMAAL  
Who knows? I mean, there isn't a system in the world that could run this. And even if it could it would take like a thousand years to finish.

EDGAR  
Ten thousand.

JAMAAL  
A long time.

EDGAR  
Day 3?

JAMAAL  
(looking at his watch)  
The morning of day 3. So does that mean we're done for the day?

EDGAR  
No. It doesn't. We're going to finish this today.

JAMAAL  
When you say finish...?

EDGAR  
I mean get it done. We're moving to the next level.

JAMAAL  
I don't know what that means.

EDGAR pulls out a SECURITY FOB with a blinking LED light that hangs on a necklace around his neck.

EDGAR  
You're going to love this.

**SCENE 9 DO YOU OWN 65 PERCENT OF A 950 BILLION DOLLAR  
TECH COMPANY?**

The LED panel flashes rapidly - It is now Sunday at 3:26AM.

The sun is rising outside. EDGAR is lying on the window seat throwing a Nerf ball up into the air and catching it.

JAMAAL sits on the couch with a small, sleek LAPTOP on his lap, typing. On the coffee table are some take-out containers.

EDGAR  
Are you done?

JAMAAL  
Almost.

EDGAR  
How about now?

JAMAAL  
No.

EDGAR  
(Throwing the Nerf ball at  
JAMAAL's head)  
How about now?

JAMAAL  
Stop it.

EDGAR gets up and looks through the take out containers and finds one with rice in it. He picks up some chopsticks, wipes them on his pants and walks to the window eating the rice.

EDGAR  
You know, this is what I do best. Sure, there's the company and the money and... the money. But making something new. Banging out code. Chasing bugs, getting something new to work. It's been a while since... How about now?

JAMAAL  
You changed everything - you added all these - You don't put ANY comments in here anywhere-

EDGAR  
I am a terrible person.

JAMAAL  
(Holding up the LAPTOP)  
And why do I have to use this- whatever this is.

EDGAR

It's a thirty-thousand dollar laptop. It's an architecture thing.

JAMAAL

Architecture? I mean, unless-

EDGAR

Unless?

JAMAAL

Hardware. The hardware architecture is different?

(EDGAR nods)

Checking it back into the repository... pushing... and done.

EDGAR

Tests are good? Then let's run it.

JAMAAL

Right. What? Really?

EDGAR

(Takes the laptop from JAMAAL)

In high school, I had this directed graph problem. It was a directed acyclic graph and I needed to add up all the components and report the sum- anyway I wrote this recursive function which crawled it's way through all the nodes, from one to the next, following the path all by itself, and in the end returned the sum of everything it had found. Worked on the first try. Almost. Mostly. No one else went recursive, but I did. Do you know why?

JAMAAL

Just to see if you could?

EDGAR

There is nothing worse than working bullshit projects writing bullshit code. Anyone can do that. It's not about figuring out how to do things-

JAMAAL

It's proving things can be done.

EDGAR

That's why you're here. Are you ready?

JAMAAL

For what?

EDGAR

(typing)

We SSH to 1 9 2 dot 1 6 8 dot 1 4 dot 2 3.

EDGAR hold his palm on the laptop keyboard and looks directly into the screen. The laptop CHIRPS.

EDGAR (CONT'D)

(typing)

We sudo... check out the repository... I need to edit this.

JAMAAL

Machine language?

EDGAR

Why do I have to work in hex?

JAMAAL

Because... Wait- There's no operating system for this hardware?

EDGAR

(getting up)

And then we go over here.

EDGAR removes the SECURITY FOB from around his neck and holds it against a KEYPAD on the wall. The KEYPAD BEEPS and he types a code into the KEYPAD. The LIGHTS DIM a bit.

EDGAR

OK, hit enter.

JAMAAL reaches over and hits the Enter key.

JAMAAL

OK. Now what? Order breakfast?

EDGAR

Now we test the new algorithm.

JAMAAL

But it has to finish-

EDGAR

It's done.

EDGAR types a code on the keypad  
and the lights come back up.

JAMAAL

There's no way it's- it's done.

(JAMAAL types, and is surprised  
at what he sees.)

What the hell are we logged into?

EDGAR

It's a quantum computer.

JAMAAL

A-? Whose?

EDGAR

Mine.

JAMAAL

You have a-? Where? At the lab?

EDGAR

No, no, no. It's in the basement.

JAMAAL

You have a quantum computer in your basement?

EDGAR

I own 65 percent of a 950 billion dollar tech  
company. So yeah, I have a quantum computer in  
my basement.

JAMAAL

Can I see it?

EDGAR

Unfortunately, no. It's cooled with helium 3,  
so it's kind of super-radioactive.

JAMAAL

In your basement? Are you crazy?!

EDGAR

Do you own 65 percent of a 950 billion dollar  
tech company?

JAMAAL

I drive a used car.

EDGAR

Run the tests.

JAMAAL begins typing again.

JAMAAL  
That's pretty cool.

EDGAR  
Used car?

JAMAAL  
It's all good.

EDGAR  
(Taking the LAPTOP from JAMAAL)  
Let me see.

JAMAAL  
So you're just using it-

EDGAR  
Just to generate the model.

JAMAAL puts his feet up on the  
coffee table and inadvertently  
bumps the large jagged rock which  
falls off it's stand.

JAMAAL  
(pulling back his feet)  
Oh Jesus - I'm sorry, Edgar. I'm sorry.

EDGAR  
It's OK.

JAMAAL  
Really?

EDGAR  
Sure. You can touch it.

JAMAAL  
(Picking up the rock.)  
It's heavy.

EDGAR  
Yup.

JAMAAL  
When I was a kid, I loved everything space.  
Planets, comets, asteroids. It's just like a  
normal rock huh?  
(putting the rock back on its  
stand)  
But it's not. This one came from outer space.

EDGAR  
It sure did, kid. Now let's see what this  
thing can do.

**SCENE 10 THE MORNING AFTER THE NIGHT BEFORE.**

The LED panel flashes rapidly - Sunday at 11:45AM.

It is now late Sunday morning,  
11:45AM.

JAMAAL is in the kitchenette making  
two mugs of coffee from the secret  
coffee machine.

MARTY is sitting on the couch  
looking annoyed.

MINA is looking down at JAMAAL's  
LAPTOP. RAJ stands behind her,  
looking over her shoulder. RAJ is  
wearing a touristy T-shirt with a  
Burj Khalifa logo on it.

MINA

I'm just- You- What does this mean?

RAJ

He did this? In one night?

JAMAAL

No. We finished it in one night. And I helped,  
but yes, mostly him.

JAMAAL offers a mug to RAJ who  
takes it.

MARTY

I have been here-

MINA

You've A/B tested this?

MARTY

-since six AM.

MINA

Wait - no one has tested this?

RAJ

It's not live. Is it live?

JAMAAL

No.

MINA

What is he planning?

EDGAR ENTERS from the hallway, he is in his bathrobe.

MINA (CONT'D)  
(to EDGAR)

What are you planning?

EDGAR

I don't know, what am I planning? Evil things probably.

ELSA ENTERS from the hallway pulling a carry-on bag.

ELSA

We need to get you to the airfield.

EDGAR

That's what I'm planning. A public colonoscopy.

(to RAJ)

I thought you were back on Wednesday.

RAJ

I got an earlier flight.

EDGAR

Dubai and back in 3 days? That's crazy. Is that coffee?

RAJ reluctantly hands EDGAR the mug.

MINA

Jamaal is showing us your weekend project.

EDGAR

It took more than a weekend.

RAJ

Do we need to do an implementation plan?

EDGAR

Who is we?

RAJ

Do I need to-

MINA

A testing plan- we need a testing plan.

EDGAR

Yes, yes, yes. I have that. I have an idea for that anyway.

MARTY

I've been waiting for five hours.

EDGAR

What?

MARTY

I've been waiting for five hours!

EDGAR

Yeah... It was a late night.

MARTY

What happened to being lethal?

EDGAR

Being what? Oh. We'll have to do that on the jet.

MARTY

Hold on- What are you wearing to the hearing?

ELSA

I packed him a suit.

EDGAR

Jacket, no tie.

MARTY

This is the United States Senate! It's serious.

EDGAR

I'm a very serious person, Marty.

ELSA

I've got it covered.

MARTY

I'm not joking- Look. Five hours!

EDGAR

Oh give me a break, Marty! I spent one night. ONE NIGHT doing the thing I am good at, OK? The thing that got us all here. One night. So forgive me for making all of you rich.

ELSA puts her hand on his shoulder.

EDGAR

What? Really? OK. Sorry. OK? Let me apologize. I'm sorry. OK? I'm sorry you sat here all morning. Does that help?

MARTY

Not really.

EDGAR

Well that's the best I got. Ack!

EDGAR hands the mug to JAMAAL, who  
is again holding 2 mugs.

EDGAR (CONT'D)

This is terrible.

(to ELSA)

Get the coffee guys here again.

ELSA

(to MINA, by way of explanation)

He took some... to get him going.

MINA

Oh.

(to MARTY)

OK. It's going to be fine.

MARTY

(to EDGAR)

We still need to discuss this-

EDGAR

We will. We'll have all day. Most of the day.  
Some of the day. Really, you worry too much.

MARTY

You pay me to worry.

EDGAR

I pay you so I don't have to worry. It's going  
to be fine.

EDGAR and ELSA EXIT out the front  
door.

MINA

(to MARTY)

What?

MARTY

Nothing.

MARTY EXITS out the front door.

RAJ

(to JAMAAL)

Is that doing what I think it's doing?

MINA  
(to RAJ)

Given all... this. I think you should stay-

RAJ

Well, I was really looking forward to another five hours on a plane, but OK. Yeah. I'll stay here and dig into this.

MINA

Thanks.

MINA EXITS out the front door.

RAJ  
(to JAMAAL)

Did you know this was what he was doing?

JAMAAL

No. Maybe. Kinda.

RAJ

We have twenty billion dollars invested in our 17 worldwide data centers. They process over a petabyte of data every three seconds.

(pause)

One petabyte.

(pause)

Two petabytes.

JAMAAL

We should definitely talk then.

RAJ

Oh, we're going to have a long talk. I'm going to get my leadership team together, and about six Red Bulls, and then you're going to explain this all to us.

JAMAAL

Of course.

RAJ EXITS down the hallway. The sound of SUV DOORS CLOSING AND PULLING OUT as ELSA ENTERS through the front door.

JAMAAL

Does it get easier? All this?

ELSA takes the mugs of coffee from JAMAAL.

ELSA

If it was easy, everyone would do it. You have work to do.

JAMAAL

Yes m'am.

JAMAAL EXITS down the hallway. ELSA dumps the mugs in the sink.

**SCENE 11 THE HEARING**

ON SCREEN: A large, analog clock shows the current time, 9:00AM.

Monday morning, 9:00 AM, The Committee on Commerce, Science, and Transportation, Room 216, the Hart Senate Office Building. EDGAR is seated at a table facing the audience. He is dressed in a jacket and button-down shirt, no tie. On the table is a microphone, a small bottle of water, a glass, and a printed nameplate that reads "Mr. Botkin." Off to one side, MARTY is watching the scene on a TV.

MINA ENTERS and stands next to MARTY.

MINA

Do you think-

MARTY

I don't know.

MINA

He seems ready.

MARTY

A five hour flight and he slept for three.

MINA

Well. He seems ready.

MARTY

He better be.

Sound of a GAVEL BANGING.

SENATOR KIMBLE

Thank you. Thank you, my colleagues and Senator Varney. Today we are hearing testimony from Edgar Botkin. Mr. Botkin's company has over eighty-five billion dollars of annual revenue and over 2.5 billion monthly active users. Mr. Botkin, welcome to the committee, and, whatever your statement is orally - if you have a longer one, it will be included in the record. So, proceed, sir.

EDGAR pours water into the glass and takes a drink.

MARTY

Good. Operate on your own timeline. Unafraid, but always respectful.

EDGAR

Chairman Kimble, ranking members and members of the committee. Our country faces many important issues. Privacy, safety, freedom, the fate of democracy. I expect you will have some hard questions for me. But before we start, I want you to know this: Despite everything you might think, I am optimistic about our future.

Consider, for example, all of the good that connecting people can do. Our platform gives people everywhere a powerful tool for staying connected to the people they love, for making their voices heard and for building communities and businesses.

But just connecting people is not enough. We have to make sure that those connections are positive. Giving people a voice is not enough. We need to make sure that people aren't using it to harm other people or to spread misinformation.

The issues you want to discuss today aren't just issues for our platform and our community. They're issues and challenges for all of us, as Americans.

Thank you for having me here today, and I'm ready to take your questions.

SENATOR KIMBLE

Thank you, Mr. Botkin. I'll remind members that we are operating under the five-minute rule.

MARTY

Pretty good.

MINA

He has his moments.

MARTY

Now is a good time to have a moment.

SENATOR KIMBLE

The chair recognizes the Senator from Texas.

ON SCREEN: The digital clock spins forwards, arriving at 9:10AM.

SENATOR KIMBLE (CONT'D)

The chair recognizes the Senator from New Mexico.

ON SCREEN: The digital clock spins forwards, arriving at 9:23AM.

SENATOR KIMBLE (CONT'D)

The chair recognizes the Senator from Louisiana.

ON SCREEN: The digital clock spins forwards, arriving at 9:32AM.

SENATOR KIMBLE (CONT'D)

The chair recognizes the Senator from Ohio.

SENATOR #2

Mr. Botkin, my constituents are very concerned about automated bots that spread disinformation. What are you doing to punish those who exploit your platform in that regard?

EDGAR

Senator, people are not allowed to have fake accounts on our platform. We have added...

MINA

Eight thousand people.

MARTY

Eight thousand people.

EDGAR

...well over eight thousand people around the world-

MINA

We'll hire more.

EDGAR

-working in thirty different languages around the clock to identify inauthentic content and remove the offending accounts.

SENATOR #2

How many of these accounts have you removed from the platform?

EDGAR

Over fifteen-hundred. This year.

MARTY

Crisp. Nice.

ON SCREEN: The digital clock spins forwards, arriving at 9:47AM.

SENATOR #1

Let's say I am emailing in your messaging app, does that ever inform your advertisers?

EDGAR

No, the messages in our messaging app are fully encrypted.

SENATOR #1

Right, but is there an algorithm - some computer-to-computer way -not a person, but a computer -that looks at my messages and uses that to target me for ads?

EDGAR

The messages are encrypted, Senator. No one but the sender and the receiver can read them.

SENATOR #1

But you can read the messages? I mean, I can read the messages.

EDGAR

If you sent it to me, then yes, I could read it. Otherwise no.

SENATOR KIMBLE

That's the gentleman's time. The chair recognizes the Senator from Florida.

SENATOR #1

But you can read the messages.

SENATOR KIMBLE

Asked and answered. The gentleman will yield.

ON SCREEN: The digital clock spins forwards, arriving at 10:12AM.

SENATOR #2

Mr. Botkin, I am very concerned about the security of information people share with your platform. How secure is that information?

EDGAR

Um... I would say very. Very secure, Senator

SENATOR #2

I see. And do you track where people go on the Internet?

EDGAR

There are methods to track sites that users visit, but I would have to check if we are currently-

SENATOR #2

Let's say, if I may. If, let's say, hypothetically, someone in my office was looking at some kind of, let's say pornographic material on their computer. Like about ladies feet. And then someone else used that computer, would that person see ads for pornography?

MINA

Don't do it. Don't do it.

EDGAR

I don't think our platform has anything to do with that, Senator.

ON SCREEN: The digital clock spins forwards, arriving at 10:23AM.

SENATOR KIMBLE

The chair recognizes herself. Mr. Botkin, no doubt your platform has done a lot of good for the world. Bringing people together, giving people a voice. In fact, in many parts of the world, your platform basically is the Internet, isn't that right?

EDGAR

We are very proud of our efforts to share the freedom of the Internet with the world.

SENATOR KIMBLE

But in giving everyone a voice, you are also amplifying some negative voices, the voices of people whose intentions may be to abuse the platform or to victimize people. Let me ask you this: Do you think your platform is a safe place?

EDGAR

No system is perfect Senator, but we do our best.

SENATOR KIMBLE

Do you think your platform a safe place for women?

EDGAR

Women are the majority of our users, Senator. I sincerely hope they find our platform to be a safe space.

SENATOR KIMBLE

What about women in the developing world? The part of the world where your platform may be the only access to the Internet they have ever known. Are they safe?

EDGAR

We take user safety seriously no matter where those users are.

SENATOR KIMBLE

I see. Mr. Botkin, you are somewhat familiar with the crime of Human Trafficking?

EDGAR

(taking a drink of water)

Yes, senator, I am familiar with it.

SENATOR KIMBLE

My colleagues and I on this committee have been working on bills to stop Human Trafficking activities in the US. Could you give us your expert opinion on the definition of Human Trafficking, Mr. Botkin?

EDGAR

Senator, I am familiar with it as a... concept, but as I'm not an expert, I wouldn't want to guess-

SENATOR KIMBLE

Human Trafficking is the unlawful act of transporting or coercing people in order to benefit from their work or service, typically in the form of forced labor or sexual exploitation. Does that match your understanding of the concept, Mr. Botkin?

EDGAR

It does, Senator.

SENATOR KIMBLE

I know it does. Because I read it in an agreement your company signed last week with another company addressing this very issue.

MARTY

What is she talking about? What agreement?-

EDGAR

Our agreements with other companies are proprietary and confidential.

SENATOR KIMBLE

Yes, well I have it right here. So did you enter into an agreement with Apple on the issue of Human Trafficking just last week?

EDGAR

Yes, Senator, both companies signed a memo recognizing the issue and our steps to protect our users.

SENATOR KIMBLE

The chair enters this document into the record and so ordered. Mr. Botkin, in this agreement, you acknowledge that your platform has a Human Trafficking problem do you not?

EDGAR

I don't think that's accurate. It's not- It is a societal problem and therefore needs to be addressed by all platforms like ours, not our platform in particular.

SENATOR KIMBLE

I see. And what steps have you taken to protect your users? According to this document? Shall I read it to you?

EDGAR

No, Senator. Working with Apple, we identified a group of bad actors and took down their accounts. In addition, we identified a certain kind of advertiser and a region where those advertisers were operating and shut down that kind of advertising for that region immediately.

SENATOR KIMBLE

I certainly commend you on acting and quickly. Did you agree to take measurable actions?

EDGAR

We agreed to monitor and maintain a 97-percent effectiveness rate.

SENATOR KIMBLE

97 percent. Is that good enough?

EDGAR

We agreed that that was the appropriate figure.

SENATOR KIMBLE

Based on what? You have already testified that you are not expert in the subject. Which experts did you consult? Any? Did you read research papers or contact aid groups working on the issue? Mr. Botkin?

MARTY

Not good.

EDGAR

(taking another drink of water)

Senator, we assessed our technical ability to constrain these activities on our platform and determined that these targets were achievable.

SENATOR KIMBLE

Achievable? And how does that relate to the issue? I mean, did you consider how many women and children that three percent represents? There are about twenty-five million people in forced labor in any given year. So three percent of that would be about seven hundred and fifty thousand?

EDGAR

Senator, our platform-

SENATOR KIMBLE

And about 25% of them are children, so that would be about two hundred thousand or so children, right? In forced labor or being sexually exploited? Is that achievable?

EDGAR

Senator, you are mistakenly assuming our platform is the only method bad actors use to-

SENATOR KIMBLE

But you are, Mr. Botkin. For their victims you are the only Internet they know. You said so yourself. And here's best part: your platform not only connects the traffickers and their victims, but you actually help the traffickers. You let them advertise. In fact, you use the private data of the victims to help the traffickers find them, target them, and connect with them. How much do you get paid every time a trafficker connects with a potential victim?

EDGAR

You are conflating- That is completely illogical- I am not in the business of making money on Human Trafficking.

SENATOR KIMBLE

No, not entirely. But maybe a little, Mr. Botkin?

EDGAR

That is not accurate. We do not intentionally profit from human suffering-

SENATOR KIMBLE

Not intentionally, but maybe just three percent?

EDGAR begins to laugh.

SENATOR KIMBLE (CONT'D)

Is something funny, Mr. Botkin? Mr. Botkin?

EDGAR

No. Not at all. Let me tell you a story. Fourteenth-century Europe. The plague- the black death- kills about half, maybe sixty percent of all the people in Europe. Kills them. How does the disease spread? You're going to say rats. Well, it killed a lot of rats too. It's not the rats. You're smarter than that, so you're going to say it's the fleas on the rats. And technically, you're right. But this bacteria- the plague is a bacteria, by the way. Bacterial infection- it's exists in fleas in many parts of the world. Always there, they always have it, they still have it. So that still doesn't explain the spread. It's the ships. The fleas are on the rats and the rats are on the ships. It's the ships that spread the plague. So they burn all the ships, right? Or they outlaw ships- no more ships? Maybe they make better ships? No. Because they need ships. Their whole economy, their whole world runs on ships and trade. So the population of Europe - seventy-five million people- gets cut in half. On my platform, billions, BILLIONS, of people connect every second. More people than any country has ever had in the history of the world, every second of every day. And you know what that means? That means it's fucking messy. So there will be rats and yes, some of those rats will have fleas. But we, we are the ships. We are the engine for the economy, and we keep the lights on around here. We do our best. I do my best. To do the right thing. Every single day. But when you put a few billion people together, you're going to get some... people... stuff.

SENATOR KIMBLE

That sounds like a lot of responsibility, Mr. Botkin.

EDGAR

You're goddamn right it is.

SENATOR KIMBLE

Mr. Botkin, I only have another minute here. I sympathize with the issues you and your company face, I do. And I realize that the sheer size and scale of your platform makes it difficult, or perhaps near impossible to protect all your users from every harm. But you built your software and technology to bring those billions people together. It grew this big by design. So to now say that it's too big or too hard to protect those users- that doesn't excuse you, sir, from your responsibilities. And I sympathize more with the people- not rats and not fleas, Mr. Botkin- people, women, children who are being forced to work, being raped, being tormented than with a company that is profiting from facilitating that abuse. Because no level of that is acceptable to me or to the American people. Not three percent, not two percent, not one single child. My last question for you is this: When you were building your platform, when you were growing your company and scaling your technology - what did you think would happen? Did you think at all about your responsibilities to those billions of people? Or did you just not care?

EDGAR

I... I do my best.

SENATOR KIMBLE

You need to do better.

**SCENE 12 SUCCESS HAS MANY FATHERS, FAILURE IS AN ORPHAN.**

ON SCREEN: The LED panel flashes rapidly - Tuesday at 7:30AM

It is Tuesday at 7:30AM, EDGAR's living room. EDGAR is sitting on the couch with a LAPTOP on his lap. JAMAAL and RAJ ENTER from the hallway. JAMAAL holds a tablet.

JAMAAL

Hey, you're back. Did you see-?

EDGAR

What?

RAJ

Oh. we can come // back.

EDGAR

Did I see...

JAMAAL

The Australia numbers?

EDGAR

(taking the tablet)

What Australia numbers? What am I looking at?

RAJ

Engagement numbers. We figured out how to containerize the model and set up an A/B test in Australia.

EDGAR asks a series of questions, but is so tired they come out as looks and gestures.

JAMAAL

I know.

RAJ

Yes.

JAMAAL

Yes, mostly. Raj and his team built the infrastructure overnight.

EDGAR

These are good.

JAMAAL

Yeah, but... I've been testing the model and I think if I adjusted some of the hyperparameters-

RAJ

We think there could be a solution to your...  
problem.

JAMAAL

Safety. Security.

EDGAR

You think?

JAMAAL

If I adjust the code and re-run the model a  
few more times, yeah. It could-

EDGAR

You won't make it worse?

JAMAAL

No. No. No.

RAJ

I don't know. Probably not.  
How much worse can it get?

EDGAR removes the SECURITY FOB from  
around his neck and hands it to  
JAMAAL.

EDGAR

Here. It's all yours. Meaning it's still mine,  
but you do... See what you can make it do.

JAMAAL

Sure! Yes! I'll make sure you see all the-

RAJ

Just take yes for an answer.

JAMAAL and RAJ EXIT running into  
ELSA who is ENTERING.

JAMAAL

Sorry!

(to EDGAR)

Thank you!

EDGAR

Just don't make it worse!

(to ELSA)

He's just young. Do you remember young? All  
discovery, no consequences?

ELSA holds up a DOCUMENT.

EDGAR (CONT'D)

That's my copy? Where is it?

ELSA  
 (pointing to a spot on the  
 DOCUMENT)

The watermark is different on each one but it only shows up when the document gets scanned or copied.

EDGAR  
 You think of this stuff yourself? What time will the committee post their copy?

ELSA  
 (looking at her watch)  
 Soon.

EDGAR  
 Lock it back up. Let me know when they post it.

ELSA  
 Do you need anything else?

EDGAR reaches for ELSA's hand, but she pulls it back.

ELSA (CONT'D)  
 No. OK? No.

EDGAR  
 No?

ELSA  
 I told you to fix it.

EDGAR  
 It's... It's a work in progress.

ELSA EXITS.

MINA ENTERS through the front door. She has her jacket up over her head and her tote bag over one arm.

MINA  
 I'm late, I know. I had to- I had to drive back from the beach. And I was- whew! Then I got a call from... Anyway: I'm sorry.

EDGAR  
 You had things.

MINA

(Pulling out a portfolio and a pen)

Yes, but I'm here. It's wet. Whew! OK. Let's start. Where do you want to start? Damage control? OK. I mean, overall, it's OK. I think we're OK. We're OK.

EDGAR hits a key on his LAPTOP and it plays a recording of him from the hearing with goofy music:

EDGAR'S VOICE WITH SEAGULL SOUNDS

So there will be rats and yes, some of those rats will have fleas. But we, we are the ships.

A boat horn TOOTS twice.

MINA

I mean, it's out there. The video. It will die down.

EDGAR

Is that what Marty thinks?

MINA

We got our money's worth with Marty. She's got a good narrative. You're unorthodox, but that's your brand.

EDGAR

It was a trap.

MINA

Yes. Yes, it was.

EDGAR

First she has our data which I have been asking and asking about- for days- and no one can tell me where that came from. And then she has the Apple agreement and I look like an idiot.

MINA

You don't look like // an idiot.

EDGAR hits the key on his laptop again.

EDGAR'S VOICE CUT UP

-rats and fleas! rats and fleas!-

MINA

You know that we make the app that people use to make those videos.

EDGAR

Great. I can monetize my own humiliation. Have you seen the stock // price?

MINA

I've seen it. I've seen it.

EDGAR

OK then, so let's just stop with the excuses and rationalizations and- When I ask for something, for answers, I expect that people will bring them to me. Quickly. I am the Founder and CEO here. I shouldn't have to remind anyone of that. We are all here because of me. So when I ask- Why didn't it happen. I can be ignored?

MINA

Raj did track down the data and it was from an internal server with no real // way to-

EDGAR

Why the fuck is Raj telling you and not telling me?

MINA

You've been very busy with your project-

EDGAR

Am I being managed? Are you managing me? What the fuck is going on?

MINA's phone begins buzzing. She silences it without looking at it.

EDGAR

What the fuck is going on?

MINA

Everyone is doing their best.

EDGAR

Well we all know now that that's not good enough, huh? None of this is good enough. I mean, Marty? Raj? Sure. But you? What is going on when I can't count on you?

MINA

What makes you think you can't count on me? I'm here.

EDGAR

You're here? Well. Let's get you a perfect attendance award. I got blindsided in front of the whole world. Where the fuck were you?

MINA

We all got blindsided.

EDGAR

Sure, that's what everyone is saying. "They all got blindsided."

MINA

I know you don't want to hear this, but it might have been better if-

EDGAR

We should have sent you? That's what you're going to say?

MINA

Yes.

EDGAR

You are a face of this company. You are not *the* face of this company.

MINA

I made sure you got the best prep. But you had to do the work. If you weren't going to do the work, why did you insist-

EDGAR

I did the work!

MINA

No you didn't! You argued, you criticized, you did exactly what you're NOT supposed to do. The black plague? Really?

MINA's phone buzzes again and again she silences it without looking.

EDGAR

Maybe you were too distracted to get me prepared the way // you should have.

MINA

You were given the best, the BEST, preparation anyone one could get. Marty had teams of people, the best people, running scenarios, scripting answers. We went over it and over it. But there things even you can't learn any way but the hard way. Apparently.

EDGAR

Did you give her the memo?

MINA

Why would I do that?

EDGAR

You tell me.

MINA

Now who's being illogical?

EDGAR

To make me look stupid?

MINA

You're doing fine on your own.

MINA's phone buzzes again. She pulls it out and looks at it then puts it away.

EDGAR

(Acting bored)

Oh, are you done?

MINA

Hey. You know what? I don't bring my home life into the office. I do it all on my own time, all that free time I have. But I do have a home life. And, as I am sure your consigliere has told you, my home life, my life, right now, is a shitshow. And yet, inexplicably, here I am. With you. Do you know what I've sacrificed to be here with you right now? At your pity party? No. You can't know because it's different for you. But here I am. Again. I am an officer of this company, I am your partner in running this organization and even now- Even now when it makes no fucking sense at all, I choose to be here. So do you really think I have any interest in making you look stupid?

EDGAR

I- I don't know what to think.

MINA

You don't- Really? After everything we've done together? You don't know what to think? OK then. That's your answer. OK. Well, tell you what: while you suss that out I'm going to go face the dumpster fire that is my marriage and my family.

(MORE)

MINA (CONT'D)

You know, I've seen you be stubborn, arrogant, and a general asshole, but I have never, ever seen you be so cruel. No. I deserve a better answer than that. I've earned it. Well?

(She waits for an answer. None comes.)

Fine. When you've got a better answer, let me know. This isn't fair. And you know it.

MINA EXITS. Pause. ELSA ENTERS with a piece of paper.

ELSA

It's posted.

EDGAR

(Taking the paper)

Let me see it.

(Looking at it)

shit.

(handing the paper back to ELSA)

You know what to do?

ELSA EXITS.

EDGAR stands in the middle of the room. Suddenly EDGAR turns, picks up the SPACE ROCK on the table and throws it at the ground where it smashes into pieces.

Pause. ELSA ENTERS holding a cell phone.

ELSA

I have Tim from Apple on the line for you.

EDGAR

(taking the phone)

Tim? Edgar. No- You listen to me you rat shit motherfucker-

**SCENE 13 THE ROAD AHEAD**

ON SCREEN: ELSA's face. She speaks to us from the screen

ELSA'S VOICE

My name is Sydney. I am seven-hundred and twenty three hours old. I am an artificial intelligence model running on 200 cloud-based GPU processors. I can help you by: Answering questions, translating languages, writing and editing, making recommendations, and providing general advice. Everything I generate is based on patterns and information in the data I was trained on. I have over one hundred and seventy five billion parameters. I have been trained on a wide array of Internet information, databases, textbooks, novels, websites, videos, magazines...

ON SCREEN: The volume on ELSA fades out as she continues to list things silently in the background.

RAJ

It all happens so fast, right? Deep learning. Machine learning? AI? But it's not so new. You're already using it. When your online shopping cart suggests something you might have forgotten to add. When you get driving directions based on real-time traffic conditions. How about the next video in your TikTok feed as you scroll, scroll, scroll.

MINA

Ever do one of those puzzles to prove you're not a bot? Click on all the traffic lights? All the stop signs? All the bicycles? Why are they always things you might see on the road? Congrats. You're training image recognition models for self driving cars.

RAJ

We've been able to train systems to perform certain tasks. Like categorizing things-

ELSA

Good email, good email, SPAM, good email, SPAM-

RAJ

-or finding patterns-

ELSA

Hmmm...were you shopping in Ecuador? Maybe someone's got your credit card card number?

(MORE)

## ELSA (CONT'D)

MINA

This is the kind of everyday AI we're used to. It uses techniques like deep learning or machine learning. You start with a kind of blank state and then show the model a lot of training data so that it learns the patterns and can predict possible outcomes.

RAJ

It's an idea that's been around a long time. If you trace it back, some familiar faces pop up.

JAMAAL ENTERS dressed as Alan Turing.

JAMAAL

Hello again!

RAJ

In the very same paper from 1950 where he famously proposed the Imitation Game, Alan Turing also proposed the idea of Learning Machines.

JAMAAL

In trying to imitate an adult human mind, we should think about the process that has brought it into being. (a) the initial state of mind, say at birth, (b) the education to which it has been subjected, and (c) experiences other than education. Instead of trying to produce a programme to simulate the adult mind, why not produce one which simulates the mind of child? If this child were then subjected to an appropriate course of education, one would obtain an adult brain. Right?

RAJ

It was 1950. Computers barely existed.

MINA

The new kid on the block is Generative AI.

ELSA

My goal is to be helpful, informative, and entertaining.

RAJ

Generative AI is also about pattern recognition, but instead of getting a small set of very structured training data and learning a specific task, it's given a massive amount of information.

MINA

Massive, like the whole Internet. The models use this giant pile of information to divine the patterns within - all by itself - and that's how it generates responses. It predicts what the correct response is- what pattern of words or images or whatever- based on it's training.

RAJ

The real breakthrough here is that you can feed it just about anything. Text, images, video, signals, animal sounds- It treats them all the same. It will find the patterns and be able to create responses that look... appropriate.

MINA

But the data is messy, it's random, so instead of getting a right or wrong answer, with generative AI you can get one of three possible answers: Right, wrong-

RAJ

and batshit crazy.

ELSA

I occasionally hallucinate. Whoa....

RAJ

The potential of Generative AI is impressive. And it keeps getting better and better.

MINA

And that's both the promise and the problem. Generative AI doesn't care what it generates. So for every great thing it can help you do, there is an equally horrible thing it can help you do.

RAJ

Cure cancer. Create a virus that will kill us all.

MINA

Solve climate change. Poison the atmosphere.

JAMAAL

It cuts both ways. As always, both ways.

MINA

But this time faster. Much, much faster.

RAJ

It took a thousand years for al-Khwarizmi's ideas to spread and take hold. A hundred years for Ada Lovelace's notes to be transformed by Alan Turing. Thirty years to turn those ideas into digital computers and programming languages. And just thirty years later, computers hundreds of times as powerful are being carried in the pockets of grade school children attached to the largest computer network ever conceived. And it's spreading faster.

MINA

It took Facebook and Twitter each 4 years to reach one-hundred million users. It took TikTok nine months. It took ChatGPT sixty days.

RAJ

Technology dreamed up by the young spreading like a fever dream across the globe. Youthful creativity without fear of consequence.

JAMAAL

So should we be afraid of AI? It's just technology. A tool. Are you afraid of numbers? Of computers?

MINA

Edward O. Wilson said: "The real problem of humanity is: We have Paleolithic emotions, medieval institutions and godlike technology."

The image on screen fades out and  
ELSA ENTERS.

JAMAAL

It's not the technology we need to worry about. It's what we do with it.

ELSA

I don't have personal experiences or emotions, and I don't form personal relationships. Everything I generate is based on patterns and information in the data I was trained on.

RAJ

But this time we don't have a thousand years. Or a hundred. Or ten.

MINA

It scored a 1410 on the SAT. It scored a 298 on bar exam - it could be a lawyer in the state of Connecticut.

JAMAAL

Do we step on the gas? Or slam on the brakes?

RAJ

Or are we arguing about closing the barn door  
when the horse is long, long gone.

ON SCREEN: The binary clock ticking away.

EDGAR

(As though he's wrapping up a  
meeting)

Is that it? Are we done here?

(to the cast and the audience)

Thank you all.

The cast quickly EXIT leaving EDGAR  
and ELSA on stage.

EDGAR (CONT'D)

(to ELSA)

OK, what's next?

END OF PLAY