This is Jeopardy: The Story of America's Favorite Quiz Show

Episode Eight: A Computer Called Watson

A Production of Sony Music Entertainment, and Sony Pictures TV

Buzzy Cohen: In early 2011, three iconic *Jeopardy!* contestants took the stage. Two were already household names: Ken Jennings, who got his claim to fame with a record-breaking 74-game winning streak back in 2004.

ARCHIVAL

Alex Trebek: Ken
Ken Jennings: Who is Magellan?
Alex Trebek: Yes. Ken
Ken Jennings: What is Nigeria?
Alex Trebek: Correct. Ken
Ken Jennings: What is the Dominican Republic?
Alex Trebek: Good for you….Good anticipation.

Buzzy Cohen: And Brad Rutter, who became a five time champion in 2000, won three of *Jeopardy!'s* most prestigious tournaments, and would eventually claim the title of *Jeopardy!'s* all-time highest money winner.

ARCHIVAL

Alex Trebek: Brad Rutter, Congratulations. You're the million dollar winner again.
Brad Rutter: What?
Alex Trebek: Still the biggest money winner on Jeopardy!
Brad Rutter: Are you kidding?
Alex Trebek: You got it. Congratulations.
Brad Rutter: Thank you!

Buzzy Cohen: The third contestant was new to the scene, but would quickly make headlines as a fierce competitor...

He knew his Beatles songs...

> **ARCHIVAL**
>
> **Alex Trebek:** This title gal, "children at your feet wonder how you manage to make ends meet"
>
> **Watson:** Who is Lady Madonna?

Buzzy Cohen: Dialects...

> **ARCHIVAL**
>
> **Alex Trebek:** Aeolic, spoken in ancient times, was a dialect of this...
>
> **Watson:** What is ancient Greek?
>
> **Alex Trebek:** Yes.

Buzzy Cohen: And Legal E's

> **ARCHIVAL**
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> **Alex Trebek:** This two word phrase means the power to take private property for public use. It's okay as long as there is just compensation.
>
> **Watson:** What is eminent domain?
>
> **Alex Trebek:** You're right. And that takes you up to 15,440.

Buzzy Cohen: And by the end of two games, the newcomer had his sights set on victory.

> **Brad Rutter: He was going on these runs of, you know, five, six questions in a row. Uh, I was furiously trying to buzz in. I could sort of sense Ken furiously trying to buzz in...**
>
> **Ken Jennings: I remember standing there in that moment and thinking,** *Well, it's kind of over...*

THEME MUX

Buzzy Cohen: I'm your host Buzzy Cohen. And from Sony Music Entertainment and Sony Pictures TV, This is Jeopardy: The Story of America's Favorite Quiz Show.

This week... a look back at the historic showdown between two *Jeopardy!* giants and a literal winning machine: Ken Jennings, Brad Rutter, and a computer called Watson.

THEME MUX

ACT I

MUSIC: Exciting futuristic beat begins

Buzzy Cohen: Okay, so given where AI is today, a computer playing Jeopardy may not sound all that impressive...

But in 2011, *this* was a *big* deal.

We're talking about back when the *ipad* had just made its debut and everyone was on *skype*.

So when the tech giant, IBM, first called up our friends at *Jeopardy!*... they didn't quite know what to make of the idea.

Here's former Executive Producer, Harry Friedman.

> **HARRY FRIEDMAN: IBM started contacting us and saying, we're interested in making a *Jeopardy!* computer game. And I kind of brushed it off saying, you know, we have so many *Jeopardy!* computer games already in the market, we don't need anymore. But, you know, thank you very much.**
>
> **And then a while later, he came back and said, no, maybe you misunderstood. We're looking to build a computer that could play *Jeopardy!* against live *Jeopardy!* players and understand spoken language. So that was a pretty high concept for that time.**

Buzzy Cohen: A high concept, yes! But this wasn't IBM's first tech rodeo.

They had a string of projects — dubbed IBM Grand Challenges — where they asked big science and engineering questions and came up with *big* answers.

Dave Ferrucci: I think the way we would characterize IBM Grand Challenges...

Buzzy Cohen: That's computer scientist and former IBM researcher, Dave Ferrucci.

Dave Ferrucci: Were problems that had not been solved, uh, that were known to be difficult, uh, for computers to do that. No one could quite figure out how to approach it or how to solve it, and that the impact would have significance to the scientific community and/or the business community of solving that problem. So one of the most famous of IBM's grand challenges was Deep Blue, the computer that played chess.

MUX: Suspenseful techno beat begins

Buzzy Cohen: If you're big into *Jeopardy!* and all the strategy that goes into it, chances are you've also tried your hand at chess – or at the very least you know the names Deep Blue and Garry Kasparov.

But just for more context, in 1997, IBM's supercomputer, Deep Blue, went toe to toe with Kasparov, the greatest chess player in the world at the time, for a first of its kind exhibition match.

ARCHIVAL:

Announcer: In this corner, weighing in at 176 pounds, 5 feet, 10 inches tall, world chess champion, Gary Kasparov. And in this corner, at 1.4 tons 6 feet 5 inches, IBM's supercomputer, Deep Blue.

Buzzy Cohen: The players faced off in a six-game match that lasted several days and drew media attention from across the world.

ARCHIVAL < CAMERA CLICKS>

Buzzy Cohen: Three of the games ended in a draw, but with Deep Blue's ability to process up to 100 million possible chess moves per second, the supercomputer ultimately clinched the victory.

Dave Ferrucci again.

Dave Ferrucci: it was a very exciting time. And it made headlines. It was amazing that a computer could beat the best grand master. But what was of course interesting

about Deep Blue was, it was a problem that was strongly associated with human intelligence. You know, only humans can do this.

Buzzy Cohen: Which brings us to another scientific problem IBM was trying to solve in the early 2000s.

Dave Ferrucci: One of the areas that my team had been working in was called Open Domain Factoid Question Answering, and this was really a research problem where you'd give the computer just any, you know, question and it would have to deliver that precise answer to that question.

Buzzy Cohen: Open domain question and answering is part of a bigger branch of computer science known as natural language processing.

Basically, it was one thing to teach a computer to crack a game of chess... which, when it came down to it, was mostly math.

It was another thing *entirely* to teach a computer to understand complex language.

So how did *Jeopardy!* fit into IBM's scientific quandary?

Well... it had something to do with a chance encounter between the former Vice President of IBM and some *Jeopardy!* superfans...

MUSIC: Fun beat with momentum begins

Dave Ferrucci: Charles Lickel was the person who got IBM even to consider this because the story goes that he was at a restaurant when Ken Jennings had won like 70 games in a row and it was drawing this enormous audience, the biggest *Jeopardy!* winner of all time.

And crowds in like a restaurant bar were gathering around the television to watch Ken Jennings and Charles Lickel was like, wow, that's a great idea for a grand challenge. And he shopped it around the executives and everybody got excited about it. And he eventually found me and um, I pitched to him why I thought it could be done and then was like, okay, we're gonna do this, you know, at least we're gonna try it.

Buzzy Cohen: The idea that Ken Jennings — the man, the myth, the legend — could be to Watson what Gary Kasparov was to Deep Blue? Clearly intriguing.

But was *Jeopardy!* ready to be the next litmus test for AI?

Once again, here's Harry.

> **Harry Friedman: it was very, very, very much a big deal to be able to build a computer that could understand spoken language. And we ultimately agreed with the thought in mind that maybe this is a rare opportunity for a game show, a quiz show to do something pretty meaningful in ways that no other quiz show had ever done.**

Buzzy Cohen: *Jeopardy!* would be the first of its kind to take on something like this…they were like Rocky taking on boxing champ Apollo Creed. But the thing is, Watson also thought they were the underdog in this fight and entered into its own Rocky training montage.

IBM's supercomputer had as much to prove as the show did.

The IBM team started developing Watson in 2007 and it took four long years of trial and error, and constant experimenting before the supercomputer was game-ready.

One challenge was the open domain factor. If *Jeopardy!* could ask about anything and everything, Watson, like *Jeopardy!* contestants, needed to know, well… anything and everything.

Here's Dave again.

> **Dave Ferrucci: Watson was not connected to the internet.**
>
> **Every piece of knowledge that it was gonna use had to be completely self-contained in the machine.**

Buzzy Cohen: Dave's team ended up feeding Watson more than 200 million pages of documents — from dictionaries, encyclopedias, databases, taxonomies, books, you name it. At one point, they even thought to feed Watson all of Wikipedia.

But that didn't land too well in the *Jeopardy!*-verse.

> **Harry Friedman: Wikipedia, shall we say, is not the kind of. Reliable source that we use on Jeopardy!. In fact, Jeopardy! researchers are forbidden from using Wikipedia.**

Buzzy Cohen: The idea was quickly scrapped, but IBM *did* feed Watson old *Jeopardy!* games — which brings us to another unique challenge for Dave's team. Teaching Watson to speak fluent *Jeopardise*.

Full of puns, metaphors, and wordplay, *Jeopardy!'s* material is notoriously complex. Clues, even whole categories, can feel less like classic trivia and more like mini puzzles you have to solve.

For example, one of my favorite categories – Before and After – asks contestants to connect the dots between two seemingly unrelated things.

> *ARCHIVAL:*
>
> *Contestant: Before and after for $800, please.*
>
> *Alex: Famous lingerie stores, hidden nuclear warhead. Amy,*
>
> *Contestant: What is Victoria's secret weapon?*
>
> *Alex: Yes*

Buzzy Cohen: Imagine getting a computer to understand a clue like *that*? Clearly, the folks at IBM had their work cut out for them.

> **Dave Ferrucci:** *Jeopardy!* **questions were not straightforward questions from a linguistic perspective, and that just created a lot of challenges for machines at the time.**
>
> **So, here's a great** *Jeopardy*! **question. The category was Ancient Roman Stand Up Comedy. The Question: I tell you it was so cold today... (How cold was it?) It was so cold, I wished we were back in 64 when he was emperor. Hot times, if you know what I mean!**
>
> **That's not a straightforward question that's asking you who is the Emperor of Rome in 64? But you know, like humans look at that and they go I know what that's asking.**
>
> > **ARCHIVAL:**
> >
> > **Alex Trebek: Arthur**
> > **Contestant: Who's Nero?**
> > **Alex Trebek: Nero, right!**

Buzzy Cohen: But for Watson, there was *a bit* of a learning curve.

> **Dave Ferrucci: The category was New York Times Headlines. An exclamation point was warranted for the end of this in 1918. And the right answer was World War I. Watson's answer: a sentence.**
>
> **Here's another great one, give a Brit a tinkle when you get into town and you've done this. And the right answer was call on the phone. Watson's answer, at the time, was urinate [laugh] but you start to kind of appreciate, gee, how would you make a computer do this in a smart way?**

Buzzy Cohen: Sometimes Watson was too literal, other times, Watson was just plain old fashioned wrong.

But after years of tinkering, Dave's team was getting somewhere.

> **Dave Ferrucci: we had a number of metrics that we would measure Watson's performance on, and we would know whether or not we were actually getting better. So one was how many questions it would get, right? But we would also look at how many did we get right in a particular confidence level.**
>
> **So if we were like 75 to a 100 %, how many would we get, right? If we were 75 to 50% confident, how many would we get? Right? So as we got more right in general and more right in higher confidence bins, we were doing better.**

Buzzy Cohen: Not only was Watson producing way more correct responses (even on the linguistically challenging clues), he was also getting *much much* faster.

So by 2009, the team said, let's kick the tires, and try this thing out in real life. Here's Harry again.

> **Harry Friedman: We did a bunch of, uh, practice games with former *Jeopardy!* contestants participating in those practice games. Uh, a great host named Todd Crane ran all the games for us, and I'm, I'm not sure exactly how many we did…**

Buzzy Cohen: About 60 practice games over the course of a year.

> **Harry Friedman: But, uh, it was finally determined that everything was in readiness. And so we went ahead and called the two top players at that time.**

Buzzy Cohen: After the break, a couple of *Jeopardy!* all-stars learn about the new kid on the block.

ACT II

MUSIC: Exciting techno beat begins

> **Brad Rutter: I think I first heard about the Watson idea about six months before it happened.**

Buzzy Cohen: That's *Jeopardy!* champ Brad Rutter.

> **Brad Rutter: And Maggie or Rocky, called me up and said, Hey, uh, this is a kind of a crazy idea, but IBM is building a computer to play *Jeopardy!* and they want to have it play against famous champions. Uh, you are one of the guys we called and I bet you can guess who the other guy is…**
>
> **Ken Jennings: I got a phone call in maybe early 2010 from Maggie Speak on the contestant side.**

Buzzy Cohen: It had been over five years since Ken had gotten the call–the one that transformed his life and with his 74 game winning streak, transformed *Jeopardy!*. And even though he had come back and played in some *Jeopardy!* tournaments since then, he was feeling a little, well, I'll let him tell you.

> **Ken Jennings: I was jonesing for a fix a little bit. I saw the 310 area code on my phone and thought, Ooh, this is *Jeopardy!*.**
>
> **And it was an unusual question. She said, IBM uh, wants to build a computer to play *Jeopardy!*. Would you be interested in playing a computer at *Jeopardy*! the way Gary Kasparov played Deep Blue?**
>
> **Brad Rutter: I was obviously familiar with Deep Blue, uh, playing against Kasparov, but *Jeopardy!* is completely different. You know, you have to take in the clue, think about it, and then come up with a response, which I really didn't see how a computer would be able to do, so I was fascinated. And I frankly couldn't believe that the technology was there at that time to be able to actually do it.**
>
> **Ken Jennings: I was really excited because yeah, this seemed like the future I had imagined as a kid: robots and humans playing each other on game shows. But mostly I was excited because I was pretty sure I was gonna win.**

I'd been interested in artificial intelligence my whole life. I'd taken AI classes in college and I knew that there was no natural language question answering algorithm that could play *Jeopardy!* at a human level.

Buzzy Cohen: Both Ken and Brad were curious and eager to see what IBM's so-called supercomputer — *the size of 10 refrigerators* — was really made of. They said yes. Actually, Ken said…

Ken Jennings: I will volunteer to go defend carbon-based life against the evil supercomputer from the future.

Buzzy Cohen: Game on!

The man versus machine match was scheduled for early 2011. Ken and Brad (also known as our carbon-based lifeforms) would have a few months to prepare.

Brad Rutter: I don't think just because you were playing against a computer meant that you could prepare differently or would even have to.

So I just went through these flashcards that I made with, you know, all the world capitals and Shakespeare plots and stuff like that on 'em. I actually still have them to this day. So, uh, I just went through those and made sure all that stuff was fresh in my mind.

Buzzy Cohen: Calm, cool, collected. That is Brad Rutter in a nutshell.

Ken, on the other hand, took a slightly different tack.

MUSIC: Suspenseful music begins

Ken Jennings: Well, you wanna research your opponent. At one point *Jeopardy!* sent over a journal article, I think a preprint of maybe the first kind of academic debut of Watson. And I remember looking at this graph that plots *Jeopardy!* performance. On the horizontal axis is how many clues the *Jeopardy!* player buzzes on. And on the vertical axis, it's their accuracy. How often were they correct?

And there's a scatter of dots at the top showing like every human *Jeopardy!* champion in history, so you could see what human level *Jeopardy!* champ performance is. You have to buzz about half the time and when you buzz, you have to be right nearly all the time, 90% or so. That's what it takes to win at *Jeopardy!*.

And at the bottom of the graph, there's this line showing the best questioning answer software in the early two thousands...and it's terrible. If it has to buzz half the time, it's hardly ever right. So machines were nowhere near humans. But then you see this line advancing upward through the graph as you get to Watson 0.8 and Watson 0.9 and Watson 1.0. And by the time the graph gets to what they call the winner's cloud, this line of machine performance is going right through human performance.

Buzzy Cohen: Uh Oh.

Ken Jennings: And then I noticed over to the side of the winner's cloud, all these gray dots. There's a bunch of black dots, and I'm like, what are the black dots? And I'm reading through the text, the black dots to the right of the winner's cloud represent...and I turn the page... *74 time Jeopardy champion Ken Jennings during his original streak on the show.*

So I realized I'm the black dots, and here come the machines...

Buzzy Cohen: I don't know about you guys but I'm getting major JAWS vibes over here.

Maybe Watson wasn't a *bonafide villain,* but as the game day approached, it was hard not to see this grand challenge as a kind of existential struggle.

Ken Jennings: I was at a press conference the day before the Watson match with the IBM engineers, and there's reporters from all over the world and people from Hong Kong and Sydney and Paris and New York are all asking questions.

And the questions are, *yeah, uh Dr. Ferucci, is this the evil computer from war games that's gonna launch the missiles? No, no, no, no, no.* **He would explain that,** *no, no, no...this is the friendly computer from Star Trek.*

But then the next question would be like, *yeah, I've got a question. Is this the evil robot from Robocop?* **Like it was clear that the room was full of not celebration of this new step in technology, but like deep concern over humanity's future.**

Buzzy Cohen: Sounds strangely familiar...

ARCHIVAL:

News announcer: Chat GPT's gaining popularity for its ability to craft emails, write research papers, and answer almost any question in a matter of seconds. It is a

powerful new technology with extraordinary potential, but there are also warnings about the huge risk of misuse.

Buzzy Cohen: On the cusp of obsolescence, Ken and Brad were no longer simply rival opponents trying to out-maneuver each other on the buzzer.

Instead, they were united in a mission — to play America's favorite quiz show against a supercomputer and boldly go where no *Jeopardy!* contestant had gone before.

ARCHIVAL

Announcer: In 1997, an IBM computer proved it could beat the world champion at chess. Now a new IBM computer is about to take on two champions on a slightly more challenging game board coming in February. IBM's computer Watson puts all its microchips on the line in the *Jeopardy!* IBM challenge.

Alex Trebek: Good luck, Watson...

Announcer: Only on *Jeopardy!*. Coming in February.

Buzzy Cohen: The pressure was on for team humans, but also for IBM. They had poured a lot of money, time, and resources into Watson. And... like any *Jeopardy!'s* player's entourage... they wanted their player to win.

MUSIC: Suspenseful music begins

Dave Ferucci: The stakes were so high for IBM at that. Because we knew the realities of how easily this game can flip because of Daily Doubles and the way *Jeopardy!* works, you can be way ahead. And then in the last few questions, lose the game, so it was incredibly tense

Buzzy Cohen: But IBM had one thing going for them right out the gate.

Ken Jennings: Every time I'd ever played *Jeopardy!* before it was on, you know, these cozy confines of the *Jeopardy!* set in Culver City, California. But the Watson Games didn't happen there.

Buzzy Cohen: Trading sunshine for snow, the *Jeopardy!* games would take place at IBM's TJ Watson Research center in the suburbs of New York.

Brad Rutter: They had Watson set up at the White Plains IBM campus. So it really definitely felt like an away game.

Ken Jennings: They had decked out, uh, an auditorium to look like a miniature jeopardy set.

Brad Rutter: I remember Ken and I kind of looking at each other and not being really sure what to make of this.

Ken Jennings: You know, we felt like test pilots or mercury astronauts or something. I remember he said something funny, I think this was Brad's line. We walked into the IBM auditorium and he says, *Ooh, this is an away game for humanity.*

Buzzy Cohen: An away game for humanity. More on that after the break.

ACT III

ARCHIVAL:

Johnny Gilbert: From the TJ Watson Research Center in Yorktown Heights, New York. This is *Jeopardy!*, the IBM Challenge. And now here is the host of *Jeopardy!*, Alex Trebek.

Alex Trebek: Thank you Johnny Gilbert. Thank you ladies and gentlemen, and welcome everyone to a very special *Jeopardy!* event.

Buzzy Cohen: February 14th, 2011. It was the moment everyone had been waiting for. Three podiums, 2 humans, 1 supercomputer.

Alex Trebek: Johnny, let's meet our contestants. In 2000, he became a five time champion and went on to win three of *Jeopardy!'s* most prestigious tournaments. Earning a record 3.2 million. Ladies and gentlemen, Brad Rudder and now our next player in 2004, his record breaking 74 game win streak.

Ken, who's Aristo? Ken, what's the Trojan horse? Ken La Ken, what's the doto? Ken? What is Stella? Set a standard for excellence that may never be equal. Ladies and gentlemen, Ken Jennings...

And now the newcomer. Developed and programmed, especially for this moment, making its first appearance on our national television program. Ladies and gentlemen, this is Watson,

MUSIC: Suspenseful music begins

Buzzy Cohen: *Jeopardy!* had made a couple of accommodations for the exhibition match. There would be no wardrobe changes between the two games — people were pretty keen on keeping things moving.

And because Watson technically couldn't see, there would be no video clues.

But everything else was kind of business as usual... I mean, except for the whole computer thing...

> **Ken Jennings: Of course you can't get around the fact that at the middle podium, there's not a human, there's like a machine armature. It was really just a flat screen TV on its side with cables running to the servers elsewhere.**
>
> **But you were always aware that it was a non-human presence. Cuz normally, you know, you're turning your head, you're chatting with the other players. Watson, not so chatty.**

Buzzy Cohen: The other thing that stood out to Ken and Brad? The studio audience.

> **Brad Rutter: This auditorium was also packed with a bunch of IBM employees who were all rooting for Watson.**
>
> **Ken Jennings: Each of us was allowed to bring one guest, I think, but the rest of the stands were full of IBM. Uh, executives and engineers and board members and shareholders, and they were just all cheering on their little darling.**
>
> **Alex Trebek: You are about to witness what may prove to be a historic competition: an exhibition match pitting an IBM computer system against the two most celebrated and successful players in *Jeopardy!* history...sounds like a lot of fun, doesn't it?**

Buzzy Cohen: Fun and a little unnerving... Deep breaths for Ken and Brad. It was time to play **Jeopardy!**.

Alex Trebek: Our first round of play contains these categories: Literary Character, APB All Points Bulletin, Beatles People, Olympic Oddities, Name the Decade, Final Frontiers, and Alternate meanings.

Brad Rutter: Let's take alternate meanings for 200. Alex.
Alex Trebek: Four letter word for a vantage point or a belief. Brad,
Brad Rutter: What is a view? Yes. Uh, alternate meanings 400
Alex Trebek : 4 letter word for the iron fitting on the hoof of a horse or a card dealing box in a casino, Watson,
Watson: What is shoe? You are right. You get to pick
Watson: literary character, a p b for 800.
Alex Trebek: The daily double. Now Watson, although you have but $400, you know, of course, that you can risk up to the maximum value of a clue on the board. And that is a thousand.
Watson:1000, please.
Alex Trebek: Alright, here is the daily double clue for you. Wanted for killing Sir Denver's Karu Caru appearance. Pale and dwarfish seems to have a split personality.
Watson: Who is Hyde?
Alex Trebek: Hyde? Yes, Dr. Jekyll. Mr. Hyde, either one. Acceptable. You're now in the lead of 1400.

MUSIC: Whimsical spacey music begins

Buzzy Cohen: Watson was off to an impressive start — glowing green with every correct response. But by the end of the single *Jeopardy!* round Brad had caught up. He and Watson were tied for the lead with $5,000, and Ken wasn't far behind with $2,000.

Brad Rutter: the first single *Jeopardy!* round had been sort of like exactly how you would expect three evenly matched competitors to play.

Buzzy Cohen: But in the *Double Jeopardy!* round, something shifted.

Brad Rutter: Watson started going on these runs of, you know, five, six questions in a row.

Alex Trebek: A Dana Carvey character on Saturday Night Live. Isn't that special, Watson?

Watson: Who is the church lady? Yes. Hedgehog podge for 400.
Alex Trebek: Some hedgehogs enter periods of torpor. The western European species spends the winter in this dormant condition.
Alex Trebek: Watson, again,
Watson: What is Hibernation?
Alex Trebek: Right
Watson: Cambridge for 400
Alex Trebek: with much gravity this young fellow of Trinity became the location professor of mathematics in 6,069… Watson
Watson: Who is Isaac Newton.
Alex Trebek: You are right.

Brad Rutter: I was furiously trying to buzz in. I could sort of sense Ken furiously trying to buzz in and, uh, we just had not much of a shot at all to do it, so, the biggest thing I took away was like, wow, this thing is really fast on the buzzer.

Buzzy Cohen: Ahh the buzzer… like our resident expert Fritz Holznagel would say, reaction time on the buzzer can make or break your *Jeopardy!* game. And Watson's reaction time? Well, it was pretty darn close to perfect.

MUX

Brad Rutter: I think the, uh, time for Watson to buzz in was settled at a 10th of a second. Uh, which actually makes it all the more impressive that, uh, Ken and I could ever get in when Watson was trying to buzz in.

Ken Jennings: It had a little mechanical thumb that pushed a little metal tab up and down on a button [tick, tick, tick, tick]. You know, a high schooler could have built it, but it was incredibly fast. When Watson wanted to get in, Watson got in first. And when it didn't, there were two human players. And it was a subtlety that was lost on me until we were playing and I realized, oh, this is a real disadvantage for carbon-based life here.

Buzzy Cohen: There was a second disadvantage for team humans.

Ken Jennings: Watson had been sandbagging us. We had kind of played it to a draw in the rehearsal games, but it turned out there was a turbo button on Watson and they could set it from rehearsal mode to game mode and suddenly, it was playing with more aggressive strategies. It started hunting for Daily doubles earlier, but I thought it was fair play. You know, a human player could do that too. A human player could

kind of sandbag during rehearsals in hopes of smoking its opponents out of the gate once the real game started.

Buzzy Cohen: A little pro-tip for all you *Jeopardy!* hopefuls out there. Sometimes the hustle works.

By the end of the first game, Watson had a commanding lead over Ken and Brad. But the machine still had some weak spots.

Ken Jennings: you could see in game one immediately what Watson could do and what Watson could not do. When clues were very short, for example. Watson didn't have enough time to think. You know, Watson needs Alex reading for a few seconds to decide whether or not it's gonna buzz.

Brad Rutter: So, one category that Ken and I did really well in was a category called Actors Who Direct. And the clue was just the name of the film and the year, and you had to name the director.

ARCHIVAL

Alex Trebek: Rocky two, three, and four. Brad,
Brad Rutter: who is Sylvester Stallone?
Alex Trebek: Correct.
Brad Rutter: Actors who direct $400
Alex Trebek: [Unknown]... Brad,
Brad Rutter: Who is Clint Eastwood?
Alex Trebek: Yep.
Brad Rutter: Um, actors who direct 800.
Alex Trebek: The great debaters Ken,
Ken: Who's Denzel Washington?
Alex Trebek: You got 'em

Buzzy Cohen: So shorter clues weren't great for Watson, but his biggest blunder came in the Final *Jeopardy!* round of game one.

ARCHIVAL: Final Jeopardy category is US cities, and here is the clue. Its largest airport is named for a World War II hero. It's second largest for a World War II battle. 30 seconds players. Good luck.

Buzzy: The correct response: what is Chicago. Watson's response?

Alex Trebek: What is Toronto? With a lot of question marks, which means, of course, that Watson had many, many doubts...

Buzzy Cohen: Hmmm.. maybe the machines are more like us than we thought?

But even with the occasional flubs and botched guesses... Watson was a *force.*

Ken tried to catch him in game two, but when Watson found the second Daily Double, that was the final nail in the proverbial coffin.

Ken Jennings: We went into *Final Jeopardy!* knowing that, uh, it was a foregone conclusion. Watson had run away with this thing. And Brad and I both knew the final *Jeopardy!* Clue immediately.

ARCHIVAL

Alex Trebek: The category is 19th century novelists, and here is the clue. William Wilkinson's an account of the principalities of Walachia and Malvia inspired this author's most famous novel, 30 Seconds Players. Good luck.

Ken Jennings: by the time the music starts, my answer's already there and I'm like, oh, I've got 30 full seconds. I can write whatever I want. No, no evil, IBM computer could stop me.

ARCHIVAL

Alex Trebek: Over to Ken Jennings, now 18,200 going in Brahm Stoker is what we're looking for, and we find who is Stoker I for one, welcome our new computer over the Lord and your wager... wager was a thousand dollars.

Ken Jennings: I remember the Simpsons joke of Kent Brockman, the newscaster, immediately embracing and selling out to earth's new alien oppressors. And I thought, well, I mean, Watson can kick my butt at *Jeopardy!* apparently, but I bet it doesn't try a joke here.

Buzzy Cohen: We'll take that point for team human...but what Watson lacked in good ole *Jeopardy!* humor & wit...he made up for in the *Final Jeopardy!* round, taking home the title of champion

ARCHIVAL:

Alex Trebek: Now we come to Watson, we're looking for Bram Stoker, and we find. Who is Brand Stoker...

Buzzy Cohen: Brad finished the match with a cumulative score of $21,600, Ken with $24,000, and Watson, with a whopping $77,147.

IBM was ecstatic. As was Dave, but he was also kind of relieved.

Dave Ferrucci: One of the things I feared the most going in was that we'd lose that game and that would make the headlines and no one would really understand what we had accomplished. So it was a huge relief for the win to represent the reality that we had in fact achieved the goal.

Buzzy Cohen: But a win for the machines meant a loss for team human. And that was hard to contend with in a variety of ways.

Brad Rutter: When Watson ultimately won, I felt pretty dejected. Uh, you know, I had actually never lost on *Jeopardy!* ever before that. So it was, that was a new feeling for me. I'm on team humans, you know, if I wasn't gonna win, I was rooting for Ken. And, uh, it just wasn't even close.

Ken Jennings: Losing to a computer, I just kind of felt obsolete. You know, I felt like an auto factory worker in the eighties looking at the robot that was gonna replace it on the line. It used to be an essential human trait to know things. But the Watson match was the first time that an international audience got to see a machine be just as good at knowing things as we are.

And I'm kind of wondering if that's the tipping point where people started to think, you know, what is the point of knowing, you know, where Afghanistan is on a map or who the Secretary of State is right now? Like, surely I can just Google all this stuff, right?

And that's kind of deeply troubling to me that we might be heading not into the Star Trek utopia that Dr. Ferucci thought he was building...and not the scifi one where Hal pushes us out an airlock. But just one where we think of knowing things as not important because there's just too much information out there and our computers will know it for us. As somebody who likes to learn, that's a scary dystopia to me.

Buzzy Cohen: But even in a world where technology is leveling up day by day, there's something powerful and honestly really special about the fact that *Jeopardy!* is standing the test of time.

> **Ken Jennings:** *Jeopardy!* **is the ray of hope there, you know. 230 times a year, every weeknight, like one of the most popular shows on TV is humans admiring other humans knowing things that they could easily have Googled. You know, what's the largest city in New Mexico? Wow, that guy knew that! He could have pulled out his phone, but he just knew it.**
>
> **It's one of the last spaces left like that. And, uh, I'm really proud of that. I think that's important.**

THEME MUSIC

Buzzy Cohen: Next week, on This Is Jeopardy! The Story of America's Favorite Quiz Show...

> **Lisa Broffman: Every year or so, he would call me and say, I just don't think I have it anymore. I don't think as quickly as I used to think, I make mistakes, maybe it's time for me to just step down and I would tell him, Alex, you have lost sight of how good you are.**

This Is Jeopardy! The Story of America's Favorite Quiz Show is a production of Sony Music Entertainment, and Sony Pictures TV.

It's hosted by me, Buzzy Cohen.

This episode was produced by Serena Chow and Sylvie Lubow.

The series producers are Julia Doyle, Rob Dozier, Sylvie Lubow, and Mia Warren.

Associate producer is Serena Chow.

Our series editor is Sarah Kramer. Executive producers are Lizzie Jacobs, Tom Koenig, Sarah Kramer, Michael Davies, and Suzanne Preté.

Production management help from Susonya Davenport and Tameeka Ballance-Kolasny.

Our theme song was composed by Hannis Brown. Cedric Wilson is our engineer.

Special thanks to Charlie Yedor and Steve Ackerman.

And a big thank you to the *Jeopardy!* staff and crew for all of their time and help on this. Shout out to Alexa Macchia.

If you loved the show, follow us on Apple Podcasts, Spotify, Amazon Music, Stitcher or wherever you get your podcasts.