



THE MISSING MIDDLE: WHERE AI GIVES HUMANS SUPERPOWERS

AUDIO TRANSCRIPT

PODCAST EPISODE 5

The Missing Middle: Where AI Gives Humans Superpowers

[Josh Klein]: Hello?

[Leena Rao]: Hi Josh, it's Leena.

[Leena]: Quick question: How much is 12,482 times 484?

[Josh]: Okay, give me a second.

[Leena]: While you're at it, what's the fastest way to get to the airport if I want to avoid traffic right now?

[Josh]: First, 6,041,288. In terms of the airport, go ... Why are you asking me all of this?

[Leena]: Isn't it amazing that we can do all of this using our phone?

[Josh]: Well, yeah, that is pretty incredible.

[Leena]: We've become walking calculators, navigators, and Wikipedia pages all rolled into one.

[Josh]: That's true. And it's all thanks to the technology we carry around in our pocket. It's sort of become an extension of us.

[Leena]: Yeah, but it's not just the tech doing all the work. It's us too.

[Josh]: Yeah, and when we combine forces, it's almost like we have superpowers.

[Leena]: Hey everyone, this is Leena Rao.

[Josh]: And this is Josh Klein.

[Leena]: Welcome back to another episode of Innovation Decoded, where we break down new technologies that are transforming the way we live, work and think.

Just as the smartphone amplifies our capabilities — giving rise to everything from the sharing economy to intelligent voice assistants — tech, like AI, are making us better at what we do. And it doesn't stop there, humans in turn, are also enhancing what AI can do.

[Leena]: Jim Wilson is Managing Director of Information Technology and Business Research at Accenture. He and Accenture Chief Technology & Innovation Officer Paul Daugherty are co-authors of the book, Human Plus Machine: Reimagining Work in the Age of AI. We spoke to Jim about human-machine collaboration and how businesses can bring it into the workplace.

[Jim Wilson]: I think many of us think about artificial intelligence and people in terms of competition, like two opposing sides. But while the human versus machine storyline makes for a good Hollywood movie, it's not the right storyline for leaders and educators.

In between these two supposedly competing sides is a diverse area of human and machinex



[Josh]: Yeah, and when we combine forces, it's almost like we have superpowers.

[Leena]: Hey everyone, this is Leena Rao.

[Leena]: In their book, Jim and Paul write about Tesla, which equipped their vehicles with autonomous driving software. What was so unique, however, was that the software wasn't fully deployed in the vehicle.

Turns out, the automaker was testing drivers against the software simulations and integrating them into the machines' learning process. The result? A better driving experience.

[Jim]: What we found in our research is that, although AI can be deployed to automate certain functions in certain areas the technologies greater power is really in complimenting and augmenting human capabilities. So, in essence, machines are doing what they're best at, and humans are doing what they're best at. We're seeing that AI can actually give workers super powers.

[Leena]: We've heard how AI can enhance modern vehicles, but how about plants? Could AI help create a more sustainable and productive farm? David Rosenberg, CEO of AeroFarms believes it can.

David founded AeroFarms in 2004, revolutionizing agriculture by building up. Using vertical farming, where crops are grown on top of one another, AeroFarms uses technology to produce locally at speed and scale. By embedding tech into their process, they can accurately forecast plant growth while improving their growing methods.

And you know what? It's another great example of the missing middle in action.

[David Rosenberg]: It's a team effort between robotics, automation, machine learning, sensors and human beings. Our productivity is as high as 390 times higher than a field farmer of the same-sized plot of land, and we can use as much as 95% less water to grow a plant.

[Leena]: From cost-efficient lighting to data-driven pest management, AeroFarms is showing what it means to truly harness the potential of human-machine collaboration.

To fully understand the potential between humans and machines, we spoke to another leading expert in this field.

[Josh]: Narendra Mulani leads Accenture Applied Intelligence — a practice that combines analytics, automation and AI to address complex business challenges.

Narendra believes that what's transforming businesses isn't just advanced technology but also the way people and machines work together. For him, what ties Applied Intelligence together is human ingenuity.

[Narendra Mulani]: It's become very clear that the combination of new technologies around advanced analytics, automation and artificial intelligence when combined, really can bring power to shaping industries and functions, by doing things differently and doing different things, in a manner that's exponential, compared to any one of them alone.

[Josh]: And it's important to remember just how crucial the collaboration between humans and machines is in the evolution of the workforce. People still have to create the vision for tomorrow, but actually achieving it will be difficult without the help of assistive technology.

[Narendra]: We as humans have to work in a different way, where we are training and guiding these new applied intelligence applications. We are really empathizing and we're creating new ways to either service individuals or create a better quality of life. You can tell I'm a serious optimist about all this.

[Leena]: There are plenty of reasons to be excited about the work happening in the missing middle — in some cases, it's even saving lives.

In the Saga Prefecture, located on an island just south of Tokyo, emergency responders can lose precious seconds searching for an available hospital.

In this rural community, budgets are tight, and resources are scarce. On top of that, if a hospital in Japan doesn't have the right doctor, or a bed available, they can legally reject a patient. In one instance, an elderly patient suffering from cardiac arrest was unable to find treatment. Thirty-six hospitals later, the patient was finally admitted, but it was too late.



That's when the Governor of the Prefecture reached out to Accenture for help. Takuya Kudo, Global Lead at Accenture Digital, put together a team and used technologies to solve the issue.

In doing so, they created a platform that uses real-time data to save lives.

[Takuya Kudo]: We actually conducted human engagement to convince them and guide them and ask them to enter data, so that the data supply chain would be well connected. Now, machines can take care of all the necessary information to process it by using collaborative filtering, to identify the best facility to bring patients at the right time.

[Leena]: Now, first-responders are empowered with technology, so they can make life-saving decisions in a fraction of the time. And those results will continue to occur as the system becomes further integrated and even more intuitive. As for Takuya, the impact of this new system isn't lost on him.

[Takuya]: We save human lives. And that's a really significant achievement.

[Josh]: So, we've seen how these collaborations can save lives in emergency situations. But what if working with machines could actually help humans have more engaging experiences?

[Leena]: Right, which makes you wonder, how do you build tech that detects subtleties in emotion, like a smile versus a smirk? That's what Gabi Zijderveld, CMO of Affectiva is trying to answer. Spun out of the MIT Media Lab, Affectiva bolsters the emotional intelligence, or EQ, of AI systems to create more authentic experiences between humans and machines.

[Gabi Zijderveld]: Today many of our interactions with AI systems are extremely transactional and superficial, because the systems don't understand how we're reacting to them. They don't understand our responses, our emotions.

[Josh]: That's a problem that Gabi and her team are working to solve. So far, they've analyzed over 7 million faces in 87 countries to model

algorithms that capture the complexities of emotional AI.

Brain Power is a neuro-tech company that's using Affectiva's software to deepen connections and interactions with other people that might have previously been difficult. By helping people

detect complex and nuanced emotions, the tech is ultimately creating more meaningful connections. On top of that, the more the machines interact and learn from us humans, the better equipped they will be to function in other environments.

How's brain power achieving this? They've created an interactive, AR smart-glasses platform that helps those with autism learn social and cognitive skills. Users gain points by identifying whether someone is happy or sad, which encourages them to engage with others and their environment.

[Gabi]: By this type of education through gamification, they're seeing really amazing results where these children do learn how to recognize emotions and can express their own emotions accurately and effectively.

[Josh] In making machines emotionally smarter, companies like Affectiva and Brain Power are helping people connect in their lives, as well as in their workplace. Imagine having a digital chatbot that workers could talk to when they were feeling stressed, or a system that could tell when workers were tired and needed a rest. With emotionally intelligent AI systems, our interactions could become even more meaningful.

[Josh]: As for Narendra Mulani, he believes the possibilities are endless.

[Narendra]: This is about insight and efficiencies at scale and being able to discover new ways to do things, but at the heart – especially of being able to do different things – is human creativity. We'll let the computer do it now because the cost effectiveness and the dexterity in a computer is there. Let us be humans.



[Leena]: So, Josh, what have we learned?

[Josh]: We've discovered that whether it's in a farm, a lab or a hospital, there's the potential for humans and machines to collaborate. And when we fill in that "missing middle," humans and machines gain new super powers to improve society and save lives.

[Leena]: This has been Innovation Decoded by Accenture. Join us next episode, when we'll uncover more stories of how technology is rapidly transforming business.

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