



# WONDERSTRUCT

**Columns | 6.13.24**

Wonderstruct's quick digest of relevant news, products, and trends making a difference in buildings, power, and transportation. Pairs nicely with Beams, our blog, which is coming soon.

*Outlook viewers - download external images for the full experience.*



## Building the Future: How AI Is Transforming Construction

Artificial Intelligence (AI) is all the rage, especially with the buzz surrounding generative AI that creates text, photos, and even videos from just a prompt. You've probably heard of OpenAI's ChatGPT, DALL-E 3, and Sora. But guess what? AI is also making waves in the construction industry! Market research firm [Research Dive](#) [estimated](#) that AI in construction could bring in a whopping \$8,545.80 million globally between 2022 and 2031.

So, in this month's Columns, we're breaking down how AI is making an impact on infrastructure right now. Let's see how you can start using it!

### **How Can AI Help with Planning & Permitting?**

Developers often spend ages sifting through state and local codes during the design phase to make sure their projects meet local standards. Then, municipal plan reviewers take their turn, which takes even more time. But in 2017, The City of Gainesville, Florida, and the University of Florida [teamed up to research AI solutions](#) that would increase efficiency and even automate plan review, resulting in the creation of [Autoreview.ai](#), a code compliance review software that architects, engineers, and municipalities can use. This software speeds up plan reviews and checks for code compliance within 48 hours. It's a real time-saver, especially for architects and engineers working in new areas.

### **Can Robots Help with the Labor Shortage?**

Absolutely! They can make workers more productive and efficient. There's a national shortage of construction workers, according to the [Associated Builders and Contractors](#) trade association. Some companies are turning to AI-powered robots to help.

Take [Dusty Robotics' FieldPrinter](#), for example. Instead of workers crawling around with measuring tape and string, this robot prints layout info directly onto the floor from a CAD file with precision up to 1/16". This cuts down the process from weeks to just days.

And then there's [the Canvas machine](#), which uses AI to automate drywall finishing. It can handle Level 4 Targeted Spray and Level 5 finishes consistently, and since it lifts itself, workers can stay safe on the ground.

### **Can AI Improve Safety on Construction Sites?**

Construction is a dangerous job, with [one report](#) finding that nearly half of America's deadliest jobs are in the industry. AI might be the game-changer we need for job site safety.

[Earthcam](#), known for documenting over a trillion dollars' worth of construction projects, has AI features in their [site cameras](#) aimed at worker safety. Their [AI Proximity Detection tool](#) alerts workers if they're too close to heavy equipment. Another tool monitors ladder use and sends alerts when someone climbs, ensuring safety protocols are followed. They even have tools for monitoring PPE use and dumpster levels.

Plus, companies like Caterpillar offer AI systems in their equipment to ensure drivers aren't distracted or tired. Their [MineStar Driver Safety System and Guardian 2](#) use

sensors to track head position and eye closure. If there's an issue, the seat vibrates and an alarm sounds.

### **What About Clean-Up After Construction?**

Once construction or demolition is done, you're left with a lot of waste. In fact, [the EPA reported](#) that in 2018, U.S. construction and demolition created 600 million tons of debris, more than twice the amount of municipal solid waste. Sorting through this mess is dangerous and time-consuming.

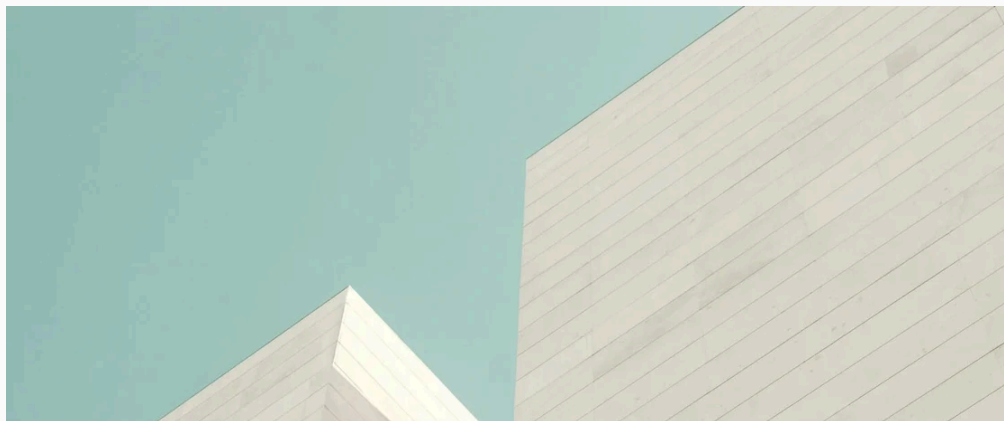
Researchers at Monash University in Melbourne, Australia, led by PhD candidate Diani Sirimewan, [trained an AI](#) to identify and sort recyclable materials and contaminants in construction waste.

"The technology could significantly reduce the volume of waste sent to landfills through better-quality recycling - benefiting the environment and reducing the need for workers to be exposed to dangerous and toxic materials," Sirimewan said in a [press release about the work](#).

Now, Sirimewan and her colleagues are working on training robotic arms to handle the dirty work. It's good for the planet and workers!

Hope you found this as fascinating as we did! AI isn't just for tech geeks anymore; it's here to make our lives easier and safer in all kinds of ways.

Stay safe and see you next month!



## **Wonderstruct News**

### **Alyce and Tim Had a Baby!**

Our amazing Founder/CEO Alyce Anderson and UX Designer Tim Norton are officially on parental leave! Congratulations to the new parents on the birth of their sweet baby girl. You'll be seeing Out-of-Office replies from the pair for now as they

focus on their little one, but the rest of us at Wonderstruct are here for all of your branding and marketing needs. Just send us a message!

## Did you know?

We offer drone photography and videography services. We'll help you showcase your projects and properties with our licensed drone pilot, Eli!

## Our Network Celebrations

- **EVstudio Celebrates 18 Years:** It was [EVstudio's](#) 18th anniversary on June 6. Congratulations to the team for hitting such an amazing milestone!

## Event: Canal Station Building Tour & Networking – June 18

[Reserve your spot](#) to experience the transformed Canal Station, a premier workplace hub in Chicago's South Loop, hosted by [CoreNet Chicago](#). Hear from the transformation team and see the significant design enhancements led by SCB architecture and interior designers, including opening up the building's façade for greater light penetration, reimagining the building entry and lobby, and creating a hospitality-inspired tenant amenity program featuring a lounge, conference center, fitness center and outdoor terrace.

Tuesday, June 18 from 4:00 – 6:00 p.m.

801 S. Canal, Chicago, IL

CoreNet Members: \$40, Non-Members: \$65

## Our Writers



### Chelsey B. Coombs

*Social Media Producer*

**Chelsey, our social media maven, is a science journalist who has built audience strategies for publications such as Popular Science, The Weather Channel and VICE News. At Wonderstruct, she uses her journalistic**

background to create data-driven social media content tailored to each client's goals and brand voice. Chelsey is based in NYC.



## Jenna Neary

*Content Director*

Jenna is a master storyteller with a knack for analytics. At Wonderstruct, she leads our clients' content strategies and manages web design projects. With her exceptional writing skills and SEO expertise, she creates engaging articles and media that not only boost brand visibility but also drive higher sales for our clients. Jenna is based in Atlanta.



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