

- Session Title: AI and Civil Engineering: Bridging Infrastructure and Intelligent Systems

- Abstract/Description (200-300 words):

I'm Vinod Kumar Enugala, and I work as a civil engineering professional with the Connecticut Department of Transportation (CTDOT). My day-to-day involves managing some pretty substantial projects—billion-dollar bridge rehabilitations, pavement preservation programs, and inspections of complex structures where getting the details right isn't optional.

But I've also developed a parallel interest that might seem unexpected for someone in my field: artificial intelligence and its applications in construction and sustainability. I've been actively researching this intersection and have even published work on real-time embodied carbon tracking—essentially finding ways to measure and reduce the environmental impact of what we build, as we build it.

What I Want to Share With You

In this session, I want to explore something I've been thinking about a lot: how the methodologies we use in civil engineering—the structured project management, the inspection protocols, the quality assurance processes—can actually guide how we adopt AI in traditional industries like ours.

I'll draw from both sides of my experience to show how intelligent systems can make our decision-making sharper, our workflows more efficient, and help us meet sustainability goals that once seemed out of reach. Through case studies from actual engineering projects and business applications, I'll walk you through practical ways to start integrating AI into your work—no technical background needed.

What You'll Take Away

My goal is to give you insights into applying the same discipline we use in engineering to these emerging technologies. I want to show you the real opportunities AI brings to fields well beyond software development—fields like ours, where decades of expertise meet new possibilities.

Whether you're curious about AI or already exploring how it might fit into your work, I hope this conversation gives you a clearer path forward.

- Key Takeaways (3-5 bullet points):

1. How to apply engineering discipline to AI adoption: Translate proven methodologies like project management and quality assurance into practical frameworks for integrating intelligent systems into your operations

2. Practical pathways for AI integration without technical expertise: Discover non-technical approaches to enhance decision making, streamline workflows, and advance sustainability goals through real-world case studies

3. Actionable strategies for traditional industries: Learn how AI creates opportunities beyond software development, with a clear roadmap to begin your integration journey regardless of your technical background