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Digital Engineering

February 5, 2026, 7 am PST

Live Stream Seattle Washington

The intent of our session today is to keep you abreast of the latest technology and ask questions from experts in the field. Your designs may substantially reduce the overall project costs saving both you and your client thousands of dollars. Staying on top of newly developing technologies allows you the designer of record to continuously learn faster and more efficient design techniques. Today we are honored to have four highly skilled speakers to talk about the subject. Can we save you a virtual seat? Yes

7 AM to 7.45 AM Pacific - Dr. Shilpa Bade-Gite, India
7.45 AM to 8.30 AM Pacific - Dr. D. Karthika, India
8.30 AM to 9.15 AM Pacific - Dr. Kaneeka Vidanage, Sri Lanka
9.15 AM to 10 AM Pacific - Dr. Rima Deka, India

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Metric	Manuel Workforce	AI-Powered Workflow
Time to Create BIM (avg.)	30-90 days	5-14 days
Cost (per project)	$10,000+	$2,000 - $5,000
Accuracy (object placement)	70-85%	90-98%
Scalability	Limited	High

Co-host
Dr. Sabyasachi Bhattacharyya
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Barak Valley Engineering College, Sribhumi, India.
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Speaker
Dr. Rima Deka,
Assistant Professor,
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Speaker
Dr. Shilpa Bade-Gite
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Speaker
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Speaker
Dr. Kaneeka Vidanage
BSc, MSc, M.Phil, PhD.
Head/ Senior Lecturer,
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Faculty of Computing,
General Sir John Kotelawala Defense University, Sri Lanka, vidanage_bvki@kdu.ac.lk

7 AM to 7.45 AM Pacific - Dr. Shilpa Bade-Gite, India

7.45 AM to 8.30 AM Pacific - Dr. D. Karthika, India

Digital Engineering has evolved from basic digital and computational foundations into a powerful, data-driven engineering paradigm. With the integration of Artificial Intelligence, engineering practices are transitioning from conventional, rule-based systems to intelligent, adaptive, and predictive models. This talk introduces the fundamental concepts of Digital Engineering, traces its historical evolution, and explains how AI enhances system design, simulation, optimization, and decision-making. The session further explores emerging trends such as AI-driven digital twins, autonomous engineering systems, and smart lifecycle management, highlighting how the convergence of Digital Engineering and AI is shaping the future of innovation, industry transformation, and workforce readiness.

Dr. D. Karthika

Dr. D. Karthika is a distinguished academician and researcher with over 13 years of experience in the field of Computer Science. Her academic and research interests encompass Image Processing, Artificial Intelligence, and Data Science, with a strong focus on integrating foundational theory with real-world applications. She holds a Doctorate in Computer Science from Karpagam University and a Master of Computer Applications (MCA) from Bharathiar University. She has also qualified for the UGC-NET examination, further attesting to her academic proficiency and commitment to excellence in higher education. Her interdisciplinary expertise bridges traditional computing with cutting-edge technological advancements.

8.30 AM to 9.15 AM Pacific - Dr. Kaneeka Vidanage, Sri Lanka

AI-enhanced Cognitive Behavioral Therapy (CBT) with Ontology Engineering

Artificial Intelligence has revolutionized numerous areas of healthcare, yet its application in psychotherapy remains largely underdeveloped. This research explores the integration of AI to support psychotherapeutic practice, specifically focusing on creating an intelligent framework to assist mental health professionals. Built on established psychological principles and developed in collaboration with mental healthcare practitioners, the proposed system employs a multi-layered ontological architecture designed to enhance Cognitive Behavioral Therapy procedures and human trait assessment. The computerized workflow addresses several inherent limitations of traditional psychotherapeutic approaches. The framework was validated through real-world testing with consultants and patients while maintaining ethical standards through anonymized protocols. The results demonstrate promising potential, though continued refinement and expanded practitioner input are essential for long-term reliability. This work represents a meaningful step forward in computational psychotherapy, contributing to the development of more accessible and patient-centered mental health treatment strategies

Dr. Kaneeka Vidanage

Dr. Kaneeka Vidanage is a distinguished researcher, senior lecturer, and academic administrator with over 17 years of experience at the forefront of artificial intelligence, healthcare informatics, and intelligent application development. He currently serves as the Senior Lecturer and Head of the Department of Computer Science at the Faculty of Computing, General Sir John Kotelawala Defence University, where he leads academic excellence and technological innovation. Dr. Vidanage holds a PhD in Ontological Modelling and Expert Systems from Universiti Malaysia Terengganu, a milestone achievement for which he holds a lifetime copyright for his original research. His extensive academic foundation also includes an M.Phil. in Artificial Intelligence and an MSc in Information Systems from the University of Colombo, as well as a BSc in Information Systems from the National University of Ireland. A highly respected voice in the global research community, Dr. Vidanage has earned close to 400 citations for his work in healthcare informatics. His research focuses on the intersection of expert systems and medical data, providing critical insights into how intelligent modeling can optimize healthcare delivery and decision-making. Beyond his administrative and research roles, Dr. Vidanage is an accomplished speaker and presenter who has showcased his work on numerous international platforms. With nearly two decades of experience bridging the gap between complex computational theory and practical application, he remains a dedicated mentor to the next generation of computer scientists and a visionary leader in the field of intelligent application development.

9.15 AM to 10 AM Pacific - Dr. Rima Deka, India

Dr. Rima Deka, India

Dr. Rima Deka received her Bachelor of Technology in Electronics and Communication Engineering from North Eastern Hill University, Meghalaya, India, and her Master of Technology degree from Assam Don Bosco University, India. She completed her Ph.D. in 2025 from the Indian Institute of Information Technology Guwahati (IIITG), Assam, India, in the Department of Electronics and Communication Engineering. Her research expertise lies in cooperative communication systems, optical wireless communication (including FSO, VLC, and hybrid RF–optical systems), and intelligent communication frameworks, with a focus on performance analysis and reliability enhancement. She was awarded the University Gold Medal for outstanding academic performance during her postgraduate studies in Electronics and Communication Engineering (2014–2016). Dr. Deka is currently working as an Assistant Professor in the Department of Electronics and Communication Engineering at KPR Institute of Engineering and Technology (KPRIET). Her professional interests include next-generation wireless systems, AI-assisted communication networks, and Co-operative communication, along with teaching and mentoring in advanced communication technologies.

7 AM to 7.45 AM Pacific - Dr. Shilpa Bade-Gite, India

Why Responsible AI Matters in Digital Engineering.

Responsible AI is important in digital engineering because artificial intelligence systems are increasingly used in areas like healthcare, education, transportation, and banking. If AI is not designed responsibly, it can lead to biased decisions, privacy violations, and misuse of data. Digital engineers must ensure that AI systems are fair, transparent, and safe. Responsible AI helps prevent discrimination, protects user data, and makes AI decisions understandable to humans. It also ensures accountability, meaning humans remain responsible for the actions of AI systems. By following responsible AI practices, digital engineers build trustworthy technology that benefits society while reducing risks and harm. Responsible AI ensures that technological progress goes hand in hand with ethical values and social responsibility.

Dr. Shilpa Bade-Gite

Dr. Shilpa Bade-Gite is a distinguished academic leader, educationist, and accomplished AI researcher, currently serving as Director & Professor at the DPU School of Science & Technology, Tathawade, Pune. With over 18 years of academic and research experience, she is widely recognized for her expertise in Artificial Intelligence, Deep Learning, Computer Vision, Medical Imaging, Multi-Sensor Data Fusion, and Assistive & Autonomous Driving systems. A Stanford–Elsevier Top 2% Scientist (2025), Dr. Gite has authored 235+ high-impact research publications with over 3000 citations, co-edited international books on Computer Vision, and serves as Guest Editors for multiple SCIE/Q1–Q2 journals. Her current research focuses on Applied AI, Explainable AI, Responsible AI, Ethical AI and Generative AI/NLP, particularly for healthcare and intelligent systems. She has led prestigious consultancy and funded projects with organizations such as Philips India Pvt. Ltd. and ARDE (DRDO) and has received multiple Best Paper Awards at leading international conferences in the UK, Dubai, and beyond. A sought-after speaker and mentor, Dr. Gite has delivered expert talks at renowned universities across Australia, South Korea, and Malaysia, while actively guiding undergraduate, postgraduate, and PhD researchers. Renowned for her academic leadership, global collaborations, and industry engagement, Dr. Shilpa Bade-Gite continues to shape future-ready AI education and impactful, ethical AI research at national and international levels.

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