**Industrial AI: Manufacturing, Materials, and Healthcare**

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POSTECH

**Abstract**

Deep learning, regarded as one of the breakthrough technologies in recent years, has attracted tremendous research attention in both academic and industrial communities. It involves learning good representations of data through multiple levels of abstraction, and can discover complicated underlying structure and features, thus achieving an improved predictive performance. As a result, mechanical engineers also start to apply deep learning technologies to their own research fields. In this seminar, I will first introduce the basic concepts of deep learning with various examples. Then, this talk contributes to demonstrating successful case studies of manufacturing, materials science and healthcare with deep learning applied. A special focus is on explainable AI and physics-informed AI. Ultimately I hope this talk can stimulate more research interests towards deep learning within our engineering disciplines.

**Bio**

Seungchul Lee is an assistant professor at the department of Mechanical Engineering at POSTECH, Korea. His research focuses on industrial AI for smart manufacturing, materials science, and medical applications. He received the B.S. (2001) and Ph.D. (2010) in Mechanical Engineering from Seoul National University, Korea, and from the University of Michigan, USA, respectively.