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Lecture Title: A Move Towards Efficient and Sustainable Construction Through Machine Learning

Abstract

The construction industry still retains a stagnant position against the utilization of recent advances in Machine Learning and Artificial Intelligence. This is partially due to the fact that the industry operates on ad-hoc project to project basis, where project teams are formed on temporarily basis to deliver specific client-oriented outcomes, providing little room for innovation. On the other hand, (supervised) Machine Learning approaches are usually data-hungry, and are ideally implemented through careful planning, and furthermore, an appreciation of the esteemed value from the extra efforts made towards its preliminary preparations. This speech provides examples of supervised Machine Learning approaches tested on a research context for automated construction planning and control, which all feed to achieving the principles of Lean Construction – a move toward more efficient and sustainable construction.

Field of Experience:

- Artificial Intelligence and Expert Systems for Mobility and Infrastructure Sectors.
- Traffic and Crowds Safety.
- Engineering Education.
- Infrastructure Project Lifecycle Assessment.