

Machine Learning in Civil Engineering

Machine Learning in Civil Engineering explores the field of machine learning and how it may be applied to practical engineering problems. Neural networks are presented to provide an intuitive understanding of machine learning theory. Issues in data collection, preparation, and modelling techniques are reviewed to provide an overview of how to approach a machine learning application. Finally, two case studies relevant to the field of transportation engineering are presented: estimating the compressive strength of concrete samples and predicting payitem bid prices of highway construction contracts based on a history of bidtabs from IDOT statewide lettings.

About the speaker

Joel Graff is a licensed PE and an 18-year veteran in public transportation engineering with the Illinois Department of Transportation. He has experience in numerous technology applications in engineering including machine learning, 3D visualization, data mining, programming, and algorithm development in traffic engineering.