

BLD119555-L

# Introduction to Machine Learning for Building Design and Construction

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## Learning Objectives

- Learn about the history of machine learning
- Learn how to use machine learning in building design and construction
- Learn how to use Weka as a machine learning platform
- Learn how to describe building design problems into a machine learning readable format

## Description

In this class, you will learn about the history of machine learning and how to apply it in your day-to-day tasks. To fully understand some of the basic concepts of machine learning, first we demonstrate some of the Autodesk technologies that uses machine learning in backend. Then using a few examples and a machine learning library called Weka, we learn how to apply machine learning to building design and construction projects.

## Speaker

Mehdi is a Senior Research Scientist working with the Design Research group at Autodesk. Mehdi holds a bachelor's degree in Civil Engineering, and master's degrees in Construction Management and Computer Science and a Ph.D. in Building Construction from the Georgia Institute of Technology. As a research assistant, Mehdi conducted advanced research pertaining to procedural and parametric modeling for structural design and optimization of buildings. Currently, his research focuses on the next generation of computing in building design: using machine learning techniques to algorithmically generate and optimize vast numbers of alternative solutions, specifically designed for additive manufacturing.

## Link to Class Handout and Material:

Please find the class handout here:

[https://www.dropbox.com/sh/blecplwmx93iy0c/AAACApAkFrr-Mn1d5z\\_wqIUGa?dl=0](https://www.dropbox.com/sh/blecplwmx93iy0c/AAACApAkFrr-Mn1d5z_wqIUGa?dl=0)