Machine learning is the science of getting computers to act without being explicitly programmed. In the past decade, machine learning has given us self-driving cars, practical speech recognition, effective web search, and a vastly improved understanding of the human genome. Machine learning is so pervasive today that you probably use it dozens of times a day without knowing it. Many researchers also think it is the best way to make progress towards human-level AI.

In this workshop, I will make you learn about the most effective machine learning techniques, and gain practice implementing them and getting them to work for yourself. More importantly, you'll learn about not only the theoretical underpinnings of learning but also gain the practical know-how needed to quickly and powerfully apply these techniques to new problems.

Course Outline: (Tentative)*

1. Introduction to Machine Learning.
2. Linear Regression.
3. Cross-validation and Bias-variance trade-off.
4. Logistic Regression.
5. K Nearest Neighbour.
6. Decision Tree and Random Forest.
7. Support Vector Machines.
8. K Means clustering.
9. Principal Component Analysis