PYTHON PROGRAMMING AND MACHINE LEARNING

COURSE OVERVIEW

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Objectives

- Basics Python Programming Language

- Machine Learning Concepts
  … and some of the popular models

- Python with Machine Learning

What Will Not Be Covered

- Solving math equations
  - Probability and Statistics

- Implementing algorithms from scratch

- Exhaustive coverage of all algorithms

Prerequisites

- Programming Knowledge
  - basic programming concepts
  - object oriented programming

- HTML, JavaScript and ASP.NET MVC
  - You are assumed to be able to write simple web interface using ASP.NET MVC or other framework

Tentative Schedule

Day	Module
1 ~ 5 (Yuen Kwan)	Python Programming Basics Machine Learning Concepts Numpy, Pandas Supervised Learning Model
6 ~ 10 (Cher Wah)	Unsupervised Learning (breakdowns to be provided later)
11 ~ 14 (Yuen Kwan / Cher Wah)	Continuous Assessment

References

- Python Language:
  - Think Python by Allen Downey
    - https://www.greenteapress.com/thinkpython/thinkpython.pdf
  - Learn Python the Hard Way, by Zed Shaw

- Machine Learning
  - Introduction to Machine Learning with Python: A Guide for Data Scientists, by Sarah Guido and Andreas C. Muller

These books are listed to help you if you need some references. There is no requirement to buy these books since you probably won't be able to finish reading the books within the short duration. The books should help you to go much in-depth into the topics.