ECON 4130 Economic Analysis for Social Networks

Tue 1:30pm-2:15pm
Thu 10:30am-12:15pm

Instructor: Vinci Chow (vincichow@cuhk.edu.hk)
Office hours: By appointment (https://www.ticoneva.com/booked/)
Teaching Assistant: TBA

Purpose of this Course

Data analysis is essential in this big data era. This course cover techniques to obtain and process data from online sources as well as machine learning methods commonly used analyze such data. Students are recommended to have knowledge of basic statistics and regression analysis before taking this course.

Learning Outcomes

After completing this course, the student should understand the common machine learning techniques used in analyzing data. They should also be able to use Python to collect data and conduct analysis.

Special Arrangement due to COVID-19

Due to the pandemic, all class meetings are to be conducted online. Face-to-face teaching and assessment may be resumed when the pandemic stabilizes.

Textbook

There is no mandatory textbook. Course materials will be designed and compiled by the instructor.

Recommended Reading: Hastie, Trevor, Robert Tibshirani and Jerome Friedman (2016) The Elements of Statistical Learning,

Python

We will frequently use the Python programming language to solve mathematical problems in class. We will use the Anaconda Scientific Python Distribution for Python 3.8 (https://www.anaconda.com/download/), which supports all major operating system platforms. Please download and install Anaconda before the second class, and preferably before the first class.

ELB 916 Computer Lab Access

To enter the computing lab, you need to use your student ID card.

To log in computers, you need to input your Computing ID and your PC LAN password. Please note that your PC LAN password is different from your CWEM password. Your PC LAN password is provided to you from ITSC with a Computing Accounts Information Slip.

Tentative Grading Scheme

Course participation	- 10%
Projects and presentations	- 90%

Class Schedule

Week 1-2	Basic Python Usage
Week 3	Data Scraping
Week 4	Regression
Week 5	Cross Validation
Week 6-7	Classification and Clustering
Week 8	Collaborative Filtering
Week 9	Artificial Neural Network
Week 10	Working with text data
Week 11-12	Student Presentations

Honesty in Academic Work

Please visit the following website for details of university policy on Honesty in Academic Work: http://www.cuhk.edu.hk/policy/academichonesty/.