Instructor: Xin Wang (xinwang35314@gmail.com)

1. Course description:
This course will teach you how to use Python programming to apply AI application. You will learn the basic Python knowledge and in the end develop your own AI application in your capstone project.

2. Prerequisites:
You don't need have programming knowledge before class.

3. Schedule

Week 1.
Part 1. introduction of Python and AI projects; Installing and initialization
Part 2. Numbers/Strings/Lists; Control flow; Input and Output
Week 2.
Part 1. Data Structures; Modules; Errors and exceptions; Classes
Part 2. Standard library I & II
Week 3.
Part 1. Project 1: Speech recognition
Part 2. Project 2: Image recognition; Deep Learning for Image recognition (CNN algorithm)
Week 4.
Part 1. Project 3: Capstone research project getting started; Social Distancing Monitor Algorithm
Part 2. Project 4: Face Mask Detector Algorithm
Week 5.
Part 1. Social Distancing and Face Mask Monitor Algorithms
Part 2. Capstone Research Report/Final Review
(Week 6-8.)
Capstone project boosting and finalizing

4. Program outputs
- Major project:generating a real AI application using Python programming
- Final report (Week 5-8)