SECTION HEADING

CSCI 2180: Introduction to Data Science

Description

Introduction to Data Science provides an overview of tools and techniques for extracting knowledge from data. This course will utilize some of the most common computing tools for visualizing, collecting, organizing, analyzing, and interpreting data. Emphasis will also be placed on communicating results, visually, verbally, and in written form.

Credits

3

Prerequisite

CSCI 2170 and MATH 1105 (may be taken concurrently)

Topics to be Covered

1. Pandas, Numpy, MathPlot libraries for Python programming

2. Data Collection and Data Frames

3. Data Visualization

4. Sampling and Estimation

5. Hypothesis Testing, Predicting Models, Model Evaluation

6. Decision Making

7. Communicating Conclusions Effectively

Learning Outcomes

1. Write Python code using applicable libraries for common tasks.

2. Explain numeric and graphical results from program outputs.

3. Utilize common statistical techniques in programs to make valid conclusions.

4. Create models from data and analyze their effectiveness.

5. Apply data science techniques to real-world data sets.

6. Communicate results of methods visually, verbally and in written form.

Credit Details

Lecture: 3

Lab: 0

OJT: 0