Big Data Analytics & Visualisation
Course Information

Pre-requisites

☺ Which year of study is appropriate for your topic?

Year 2 and above.

☺ What background and programming languages are required for your topic?

Basic programming skillset preferred – Python programming knowledge is preferred. Students with no programming background need to be paired with students with programming capabilities for project assignments.

☺ What do you think is attractive/unique about your topic to students?

Learn Big Data Analytics techniques and data visualization with presentation skill development.

Learning content and Teaching

☺ What will be covered during "trial" lectures?

BIG DATA

- What is Big Data?
- The growth of Big data and the Internet of Things

BIG DATA ANALYTICS

- What is Big Data Analytics?
- Different types of Big Data Analytics

DATA VISUALIZATION

- What is Data Visualization?
- The reasons for Data Visualization
- How to create effective Data Visualization?

😺 What will be covered during the "advanced" seminars?

BIG DATA

- What is Big Data?
- The growth of Big data and the Internet of Things

BIG DATA ANALYTICS

- What is Big Data Analytics?
- Different types of Big Data Analytics

DATA VISUALIZATION

- What is Data Visualization?
- Data as a valuable asset
- Visual perception
- Visualization design objectives

METHODS

- Taxonomy of data visualization methods

METHODOLOGY

- Identify purpose of visualization project
- Identify key factors surrounding a visualization project
- Create editorial focus and learn about data
- Conceive and reason visualization design options

PRACTICUM

- Group projects using Microsoft Excel and Tableau to create data visualization from real data

😺 What will be the nature of the project work? How do you intend to split students into project groups, each consisting of 3 or 4 students?

Students will be given a case to solve. Students are required to use Big Data Analytics techniques taught to them in the class. Programming will be done using Python to solve the problem.

Students are required to present their works using Data Visualization techniques to the class near the end of the course.

😈 Do you have any recommendations for references (books) students can study to prepare for your topic before coming to NUS?

NIL.

😈 Besides their own personal laptops, what other equipment or software would students need for your topic?

Students will be taught how to install Python and Tableau in their laptops when they arrive for the workshop. All students must have Microsoft Office installed in their laptops prior to coming for the workshop.

Assessment

😈 What forms of assessment will there be?

Project assignment