

Social Science Applications Using Python for Data Driven Research

This intensive 2-day workshop equips social scientists with essential Python programming skills critical for today's data-driven research. Participants will gain practical experience in manipulating, analyzing, and visualizing data using Python, enabling them to integrate data-driven insights into their research and professional tasks.



DR. HUANG TA-CHENG
LECTURER, DEPARTMENT OF ECONOMICS



Course Outline

Part I: Python Fundamentals and Data Structures

- Topic 1 – Introduction to Python
- Topic 2 – Basic Data Structures
- Topic 3 – Control Flow
- Topic 4 – Hands-On Exercises

Part II: Data Manipulation, Visualization, and Analysis

- Topic 1 – Data Manipulation
- Topic 2 – Data Visualization
- Topic 3 – Basic Data Analysis
- Topic 4 – Hands-On Projects



Who Should Attend?

The course is ideal for researchers, project managers, and professionals seeking to enhance their data literacy and analytical skills, empowering them to address real world challenges in social sciences through data.



Prerequisites

Participants should have a basic understanding of social sciences research methods and familiarity with datasets like surveys or spreadsheets. They should also have a laptop with Python pre-installed.

ABOUT THE INSTRUCTOR

Dr. Ta-Cheng Huang is a Lecturer in the Department of Economics at NUS. He has been teaching Python Programming for more than 3 years in NUS. Previously, he was a Research Assistant Professor at the NUS Global Asia Institute and a Lecturer at Texas State University. More recently, he was honoured with the NUS Annual Teaching Excellence Award (ATEA) for AY2024/2025.

He teaches in the areas of econometrics, financial economics, applied machine learning, programming for economists, and data visualization and communication. His research interests include micro-econometrics, applied machine learning, and field experiments.

He received his PhD in Econometrics from Texas A&M University. He has publications in journals such as *Econometric Theory* and *Economics Letters*. He also serves as a Specialty Research Instructor/CTRS.

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