Chinese University of Hong Kong, Spring 2024

ECON 5821: Data Science for Economists

Instructor:

Dr. Zhentao Shi, Associate Professor

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Lecture Hours and venue:
- ELB 202
- Friday 9:30 am —12:15 pm
- Dates: 12/1, 19/1, 26/1, 2/2, 16/2, 23/2, 1/3, 8/3, 15/3, 22/3, 5/4, 12/4, 19/4

Prerequisites:
- ECON5121

Textbooks:
- Wickham and Grolemund (2023): R for Data Science (2e) (https://r4ds.hadley.nz) *Open online reading*
- James, Witten, Hastie, Tibshirani (2021): An Introduction to Statistical Learning (2nd Edition) (https://www.statlearning.com/) *Downloadable for free*

Recommended Readings:
- Taddy (2019): Business Data Science (Amazon link)

Assessment:
1. Take-home midterm (50%)
2. Group project (50%)

Tentative coverage:

Programming is a heavy component of this course. Code demonstrations are written in R. A companion Python copy is also provided.

- Basic R
- Advanced R
- Tools for productivity
- Simulations
- Optimization
- Factor analysis
- Machine learning

Academic Honesty:

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at http://www.cuhk.edu.hk/policy/academichonesty/.

Use of generative AI tools:

Approach 3 - Use of AI tools is allowed with explicit acknowledgement and proper citation. Contents generated by AI must be marked, and a copy of conversations with AI must be attached.