

## Chinese University of Hong Kong, Spring 2023

### ECON 5821: Data Science for Economists

#### Instructor:

Dr. Zhentao Shi, Associate Professor

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#### Lecture Hours and venue:

- Friday 1:30pm – 4:15pm (Jan 13 – Jan 20, 2023; Feb 3 – Mar 31, 2023; Apr 14 – Apr 21, 2023)
- Room 505 of Wu Ho Man Yuen Building

#### Prerequisites:

- ECON5121

#### Textbooks:

- Wickham and Golemund (2016): R for Data Science (<https://r4ds.had.co.nz/>) *Open online reading*
- James, Witten, Hastie, Tibshirani (2021): An Introduction to Statistical Learning (2<sup>nd</sup> Edition) (<https://www.statlearning.com/>) *Downloadable for free*

#### Recommended Readings:

- Taddy (2019): Business Data Science ([Amazon link](#))

#### Tentative coverage:

Programming is a heavy component of this course. Code demonstrations are written in R.

- Basic R
- Advanced R
- Tools for productivity

- Simulations
- Optimization
- Factor analysis
- Machine learning

**Assessment:**

1. Take-home midterm (50%)
2. Group project (50%): Presentation in the last lecture.

**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/>.