

Introduction to Computational Social Science

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How would you define computational social science?

How computing looked **in the 1950s**



Source: NASA

How computing looked **in the 1980s**



Source: Wikimedia

How computing looks **today**



Source: Apple

How computing looks **today**



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Can you write a poem about the Summer Institute in Computational Social Science at UCLA?



ChatGPT



Of course! Here's a poem about the Summer Institute in Computational Social Science at UCLA:

In sunny UCLA's embrace,
Where minds converge in shared space,
Computational marvels unfold,
At the Institute, stories untold.

Source: OpenAI

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 - ▶ prediction with semi- and nonparametric models
 - ▶ simulation

Whose ideas will help computational social science thrive?

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Computational social science benefits from **everyone's ideas**

Perspectives that have shaped my thinking

- ▶ Athey, S. & Imbens, G. (2018). [Machine Learning and Econometrics](#). 2018 AEA Continuing Education Webcast. (Scroll down on website). See also review articles.
- ▶ Efron, B., & Hastie, T. (2016). [Computer age statistical inference: Algorithms, evidence, and data science](#). Cambridge University Press.
- ▶ Groves, R. M. (2011). [Three eras of survey research](#). Public Opinion Quarterly, 75(5), 861-871.
- ▶ Salganik, M. J. (2019). [Bit by bit: Social research in the digital age](#). Princeton University Press.
- ▶ Grimmer, J., Roberts, M. E., & Stewart, B. M. (2022). [Text as data: A new framework for machine learning and the social sciences](#). Princeton University Press.