LUCA D'AMICO - WONG

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Education

Harvard University Cambridge, MA
AB in Applied Mathematics/Economics/CS (3.99/4.0 GPA) *Sep. 2020 – May 2024*

Research

Research with Professors David Parkes and Yannai Gonczarowski May 2023 – Present
Harvard CS Department

- I am currently conducting theoretical CS research on revenue maximization for platform economies to better understand the incentives that face online platforms when recommending products to consumers.
- An extended abstract containing some of our results thus far was accepted at the 2024 AAAI Student Abstract and Poster Program, where it was selected for an oral presentation.

Research with Professor David Parkes Jun. 2022 – Jun. 2023
Harvard CS Department

- I worked on designing novel adaptive algorithms for multi-agent reinforcement learning, where I worked with Ph.D. student Hugh Zhang to develop ABCs, an algorithm capable of solving both single-agent MDPs and multi-agent imperfect information games efficiently. Our work is currently under review.

Research Assistant for Professor Ed Glaeser Nov. 2021 – Aug. 2022
Harvard Economics Department

- I conducted a literature review and performed data cleaning/analysis in Python and R for use in research on the effects of place-based policies to target prime-aged male joblessness. I also developed a simulator to model the effect of various place-based policies on different regions of the United States.

Research Assistant for Professor Melissa Dell Jun. 2021 – Present
Harvard BLISS

- I am working with Professor Melissa Dell on leveraging deep learning methods to better understand how media dissemination affects public opinion. Many of our methods focus on making historical and economic data more accessible using methods from natural language processing.
- While in the lab, I helped develop a novel neural approach to text de-duplication (published in ICLR 2023) as well as help build a dataset of newspapers from the Library of Congress's *Chronicling America* (published in NeurIPS 2023).

Publications/Preprints

- **Luca D'Amico-Wong***, Gary Qiurui Ma*, David Parkes. "Strategic Recommendation: Revenue Optimal Matching for Online Platforms" *AAAI 2024 Student Abstract (Oral)*.
- Melissa Dell, Jacob Carlson, Tom Bryan, Emily Silcock, Abhishek Arora, Zejiang Shen, **Luca D'Amico-Wong**, Quan Le, Pablo Querubin, Leander Heldring. "American Stories: A Large-Scale Structured Text Dataset of Historical U.S. Newspapers." *NeurIPS 2023 (Datasets and Benchmarks Track)*.

- Emily Silcock, **Luca D'Amico-Wong**, Jinglin Yang, Melissa Dell. "Noise-Robust De-Duplication At Scale." *ICLR 2023*.
- Hugh Zhang*, **Luca D'Amico-Wong***, Marc Lanctot, David Parkes. "Easy as ABCs: Unifying Boltzmann Q-Learning and Counterfactual Regret Minimization." *Under review*.
- Lukas Fesser*, **Luca D'Amico-Wong***, Richard Qiu. "Understanding and Mitigating Extrapolation Failures in Physics-Informed Neural Networks." *Under review*.

* (denotes equal contribution)

Teaching

I have helped to teach for many classes at Harvard, where my responsibilities include preparing class materials, hosting office hours and small sections, and grading student work.

Course Assistant

- CS 136 – Economics and Computation (Fall 2023)
- Econ 1011A – Intermediate Microeconomics: Advanced (Fall 2021)
- CS 50 – Introduction to Computer Science (Fall 2021)

Head Course Assistant

- Econ 1011A – Intermediate Microeconomics: Advanced (Fall 2022, 2023)

Clubs/Experiences

Harvard Women in Computer Science (WiCS) May 2022-Present
Outreach Co-Director

- Help organize and lead local initiatives in the Greater Boston area targeted at introducing CS to underprivileged communities and minoritized students.
- Co-created a website at www.wics-workshop.com for a semi-annual WiCS workshop aimed at introducing computer science to young women ($\approx$ 200 registrants).

MIT High School Studies Program (HSSP) Summer 2021, 2022
Instructor

- I served as an instructor for MIT's High School Studies Program (HSSP) targeted at providing educational opportunities to high schoolers.
- I co-taught two courses, one on educational disparities within the United States and another on topics at the intersection of computer science and economics.

Skills

Programming Languages: Python, C, Java, OCaml, R, Stata, SQL, HTML/CSS/JS, LaTeX
Languages: English, Italian, Spanish (Conversational fluency)