Christina X Ji

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Education

PhD. *MIT computer science.* GPA: 5.0/5.0 — Expected Jul 2024
Thesis: Characterizing variation in healthcare across time and providers using machine learning

MEng. *MIT computer science.* GPA: 5.0/5.0 — 2019
Thesis: Modeling progression of Parkinson's disease

BS. *MIT computer science.* Minor: Mathematics. GPA: 4.9/5.0 — 2019

Experience

MIT computer science PhD student — Sep 2019 –
- Analyzed real-world data with causal inference and statistics
- Built large language models to predict patient trajectories
- Created deep learning models for image classification
- Evaluated off-policy reinforcement learning policies
- Worked with PyTorch, huggingface, GPUs, SQL, and R

Genesis Therapeutics machine learning intern — Jun 2023 – Aug 2023
- Built language models and diffusion-based graph neural networks to generate molecules for specific drug targets

LinkedIn data science intern — Jun 2021 – Aug 2021
- Extracted data-driven insights on the causal effect of LinkedIn Learning features on engagement metrics and revenue
- Used distributed computing tools, including Spark

Papers

Seq-to-final: a benchmark for tuning from sequential distributions to a final time point. **CX Ji**, AM Alaa, and D Sontag. Under review. 2024.

Assessing variation in first-line type 2 diabetes treatment across eGFR levels and providers. **CX Ji**, S Blecker, M Oberst, MC Shih, L Horwitz, and D Sontag. Manuscript under preparation. 2024.

Large-scale study of temporal shift in health insurance claims. **CX Ji**, AM Alaa, and D Sontag. CHIL 2023. Oral spotlight.

Finding regions of heterogeneity in decision-making via expected conditional covariance. J Lim*, **CX Ji***, M Oberst*, S Blecker, L Horwitz, and D Sontag. NeurIPS 2021. *equal contribution

Trajectory inspection: a method for iterative clinician-driven design of reinforcement learning studies. **CX Ji***, M Oberst*, S Kanjilal, and D Sontag. AMIA virtual informatics summit 2021. *equal contribution

Courses

- Machine learning, Bayesian inference, Algorithms for inference, Probability theory, Optimization, Software construction, Econometrics
- Teaching assistant for Introduction to Statistical Data Analysis
- Instructor for Introduction to Statistical Hypothesis Testing

Awards & Service

- Teaching awards from MIT EECS & School of Engineering — 2024
- Mentored undergraduate & master's research, PhD applicants — 2020 – 2023
- Organized MIT EECS PhD orientation and visit days — 2020 – 2022