Janice Lee

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Education

New York University — New York, NY
M.S. in Applied Statistics for Social Science Research — *Sep 2023 – Present (Exp. May 2026)*

Relevant coursework: Applied Probability, Linear Regression, Unsupervised/Supervised Machine Learning, Frequentist & Bayesian Inference, Large Databases, Generalized Linear Models, Messy Data & Machine Learning (in progress)

Pomona College — Claremont, CA
B.A. in Computer Science — *Sep 2017 – May 2021*

Relevant coursework: Computational Statistics, Statistical Theory, Probability, Linear Algebra, Operations Research
Honors: Pomona College Llewellyn Bixby Math Prize, Pomona College Scholar

Work Experience

The Research Alliance for NYC Schools at NYU Steinhardt — New York, NY
Data Production Specialist, Full-Time — *Sep 2024 – Present*

- Implement data collection and processing pipelines in SAS for millions of observations in the Research Alliance's unique archive of longitudinal data on NYC public schools and communities, as well as project-specific data.
- Administer the Research Alliance's secure Linux server environment with Bash and other command line tools by handling permissions and access, installing and updating research software, and managing storage/resource use.
- Propose and implement the use of Generative AI tools to semi-automate the process of updating outdated documentation on Research Alliance data, computing environments, and programming standards.
- Foster relationships with NYCPS and other external affiliates to facilitate data sharing and research partnerships.

The Research Alliance for NYC Schools at NYU Steinhardt — New York, NY
Data Analyst, Full-Time — *Nov 2021 – Sep 2024*

- Conduct statistical analyses in SAS and create data visualizations in R for an evaluation of New York City's Computer Science for All (CS4All) initiative and an NYU Discovery Research Fund project on school pushout.
- Assist with field-based data collection efforts, including distributing surveys of thousands of teachers and students, coding qualitative data, and conducting focus groups, interviews, and classroom observations.
- Contribute to the preparation of reports and articles on findings that provide information relevant to stakeholders, policymakers, practitioners, and education science researchers.

Pomona College, Department of Computer Science — Claremont, CA
Teaching Assistant, Part-Time — *Sep 2018 – May 2021*

- Mentored students in Introduction to CS in Python/AI (3 semesters), Intro to Languages & Theory (3 semesters).
- Supervised labs, guided students through assigned tasks, debugged Python and Haskell code, held weekly mentor hours, and engaged with student questions in person and online via tools such as Piazza.

DoorDash, Geo-Intelligence Team — San Francisco, CA (Remote)
Software Engineering Intern, Part-Time Software Engineer — *May 2020 – Jan 2021*

- Proposed, architected, implemented, and documented a discrete-event simulation system written in Kotlin and a React-based web app to automate and scale testing of new location-based services.
- Assisted in the migration of geo-intelligence endpoints from DoorDash's monolithic Python application to a microservices architecture, ensured the integrity of the data pipeline from the Postgres database.

Georgia Institute of Technology, Department of Mathematics — Atlanta, GA
Undergraduate Student Researcher — *May 2019 – July 2019*

- Implemented compressed sensing and machine learning optimization algorithms (e.g., Linearized Bregman, Adam) in Python to analyze runtimes and small detail recovery for a randomized 2D signal.
- Compared the performance of a modified algorithm for the Basis Pursuit Denoising problem to existing solutions.

Leadership & Volunteer Experience

SIGCSE Technical Symposium — New York, NY
Reviewer (Panels Track) — *Sep 2023, Sep 2024*

Community Impact at Columbia University — New York, NY
GED Math and Science Instructor — *Jun 2022 – Aug 2022*

- Created lesson plans for and taught a ten-week evening course twice a week in order to prepare a class of 10-15 adult education students for the Math and Science GED exams.

Pomona College, Asian American Mentorship Program — Claremont, CA
Student Mentor — *Apr 2018 – May 2019*

- Fostered community at Pomona College among first-year students who identify as Asian American/Pacific Islander, and created spaces to explore and express one's identities in historical, socio-economic, and individual contexts.

Asian Americans Advancing Justice, Health Access Program — Los Angeles, CA
Community Partner — *Jan 2018 – Jun 2018*

- Produced a short documentary featuring Filipinx artist Soultree that explores the undocumented immigrant experience within healthcare systems, as part of the course: Social Documentation/Asian Americans.

Selected Publications & Presentations

Li, X., Jain, R., **Lee, J.** (2024). Computer science course taking and college major declaration: Longitudinal evidence from New York City [Paper presentation]. *American Education Research Association (AERA) 2024 Annual Meeting.*

Fancsali, C., & **Lee, J.** (2024). Moving the Needle on Equity in Computer Science Education: Lessons from New York City. The Learning Curve at Urban Institute.

Li, X., Jain, R., **Lee, J.** (2023). From participation to outcomes: An investigation of the racial and gender disparities in K-12 computer science education in New York City [Paper presentation]. In *Association for Public Policy Analysis and Management (APPAM) 2023 Fall Research Conference.*

Mark, J., Fancsali, C., **Lee, J.**, Li, X., Jain, R., Crawford, C. (2023). "Getting my feet wet and starting small": Building capacity for culturally responsive computer science education. In *Proceedings of the 2023 Conference on Research on Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT)*, Atlanta, GA. ACM Press.

Fancsali, C., **Lee, J.**, Clough, S. (2023). Examining Equity from Multiple Perspectives in CS. In *The Multiple Dimensions of Equity: Exploring a CS for All Initiative Through Different Lenses* [Symposium]. *AERA 2023.*

Lee, J., Fancsali, C., Clough, S. (2023). Reaching for "All": Understanding the challenges and needs of schools lagging in CS for all efforts. *SIGCSE Technical Symposium 2023.* https://doi.org/10.1145/3545945.3569783

Projects

WikiGraph | wikigraph.netlify.app — *Nov 2022 – Mar 2023*

- Processed and uploaded Wikipedia clickstream data from October 2022 into a Neo4j AuraDB instance.
- Built an interactive web app using React/TypeScript, neovis.js, and Netlify to provide users with a non-linear, graph-based approach to exploring crowd-sourced semantic links between various Wikipedia articles.
- Winner of the Best Dynamic Data Visualization for NYU's Love Data Week 2023.

NYC Schools Geospatial Visualization | leejanice.shinyapps.io/nyc-vis — *Nov 2021*

- Merged, cleaned, and utilized data from the NYC DOE and DOHMH to create an R Shiny application to provide users with a tool to explore the demographics of NYC schools and their geospatial contexts.

Skills

Languages: Fluent in Python, R, SAS. Proficient in Java, Kotlin, Java/TypeScript. Familiar with SQL, Stata, C/C++.
Technologies: Proficient with Dash, Flask, R Shiny, Git, Bash, LaTeX. Familiar with HTML/CSS/React, Neo4j.
Methodologies: Familiar with GLMs, PCA & Factor Analysis, Bayesian Inference, PSM, DiD, Machine Learning.
Other: Familiar with Qualtrics, Dedoose, Adobe Illustrator, Adobe Photoshop, and Adobe Premiere Pro.