



# JANICE LEE

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## EDUCATION

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### 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

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### Research Alliance for NYC Schools at NYU Steinhardt

New York, NY

Data Production Manager, Full-Time

Nov 2021 – Present

- Implement data collection and processing pipelines for data files with up to 3m observations in the Research Alliance's unique archive of longitudinal data on NYC schools and communities, as well as project-specific data.
- 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 and tracking responses to surveys of ~2k teachers, 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.

### AUGMENT-ED Lab at NYU Steinhardt

New York, NY

Research Assistant, Part-Time

Jan 2024 – Present

- Implement an Interactive Learning Analytics dashboard using Python and Dash in order to inform and improve the instruction of NYU CAS's Principles of Biology course through visualizing student performance data by key demographics to identify inequitable outcomes and areas that require greater pedagogical support.
- Attend design meetings with stakeholders to tailor the dashboard to the needs of the instructors and the course.

### Pomona College, Department of Computer Science

Claremont, CA

Teaching Assistant, Part-Time

Sep 2018 – May 2021

- Mentored 30<sup>+</sup> students in Intro 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

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### SIGCSE Technical Symposium

Reviewer (Panels Track)

New York, NY

Sep 2023, Sep 2024

### Community Impact at Columbia University

GED Math and Science Instructor

New York, NY

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

Student Mentor

Claremont, CA

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

Community Partner

Los Angeles, CA

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.

## PUBLICATIONS & PRESENTATIONS

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Li, X., Jain, R., **Lee, J.** (in press). 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

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### WikiGraph | [wikigraph.netlify.app](https://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](https://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

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**Languages:** Fluent in Python, R, SAS. Proficient in Java, Kotlin, Java/TypeScript. Familiar with SQL, Stata, C/C++.

**Technologies:** Proficient with Flask, R Shiny, Git, Bash, Markdown, L<sup>A</sup>T<sub>E</sub>X. Familiar with HTML/CSS/React, Neo4j.

**Methodologies:** Familiar with Regression Analysis, PCA, EFA/CFA, PSM, Network Analysis.

**Other:** Familiar with Qualtrics, Dedoose, Adobe Illustrator, Adobe Photoshop, and Adobe Premiere Pro.