

# Tia Jain

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## EDUCATION

**Computer Science at the University of California, Berkeley** (Berkeley, CA, USA), August 2021 - May 2025

GPA: 3.6

**Relevant Coursework:** Data Structures & Algorithms, The Structure and Interpretation of Computer Programs, Discrete Mathematics and Probability Theory, Designing Information Devices and Systems, AP Statistics

**Skills:** Java, Python, HTML, CSS, Web Design, Data Structures, Algorithms

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## EXPERIENCE

**Sirota Lab-Bakar Computational Health Sciences Institute, University of California, San Francisco**

*Bioinformatics and Machine Learning Research Intern*

June 2020 - September 2020

- Leveraged Bulk RNA-seq data (52000+ genes) to predict Systemic Lupus Erythematosus disease activity
- Performed machine learning (random forest classification of disease activity) with Bioconductor package MLseq1
- Leveraged DaMIRSeq package to extract the top 5 genes for each ethnic group (White, Asian) within each of 4 cell lines (CD14+, B, CD4+T, NK)
- Results will help stratify patients based on gene expression signatures to enable SLE precision medicine
- All analyses were conducted in RStudio on Amazon Web Services
- Co-authored a research paper titled "*Ethnicity-specific transcriptomic variation in immune cells and correlation with disease activity in systemic lupus erythematosus*" which was published in [BioRxiv journal](#) & [Communications Biology](#)

**Academic Intern for CS61B (Data Structures), UC Berkeley EECS Department**

January 2022 - Current

- Assist with project design and debugging during weekly labs
- Work alongside TAs during office hours to support students with homework and answer conceptual questions

**Females for Finance, Yale University**

February 2021 - May 2021

*Program Participant*

- Education, mentorship, and networking-based program taught by Yale students for young women to catalyze their finance careers
  - Learned the basics of investing, budgeting, the stock market, and finance careers (quant, investment banking, etc)
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## COMPUTER SCIENCE PROJECTS

**[AI4Sight iOS app](#), Founder (Swift)**

- Uses machine learning and a voice-activated UI to enable the blind to recognize their surroundings, allowing safer navigation of unknown terrain
- 7 features: image classification, text recognition, face detection, live weather data, barcode scanner, eye health information, and a community forum
- Integrated Google Cloud Machine Learning models with Swift-based front-end

**Gitlet (Java)**

- Designed a version control system that replicated Git's core functionality, implementing branching, staging, merging, and committing file changes
  - Wrote comprehensive integration and unit tests
  - Leveraged various data structures, hashing, serialization, and OOP
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## EXTRACURRICULAR ACTIVITIES & ENRICHMENT

**The Association of Women in Electrical Engineering and Computer Science (AWE)**

**Industrial Relations Officer, January 2022 - Current**

- Partner with various companies and connect with recruiters to organize weekly industry events for club members
- Foster a community and support women in CS or EE

**AI4ALL, July 2019 - December 2021**

**Summer Program Participant, July-August 2019**

Princeton University Computer Science Department

- Learned about the fundamentals of Artificial Intelligence with a policy and social justice-centered focus
- Collaborated to train a machine learning model to distinguish Melanoma from 7 other skin diseases (>80% accuracy)

**Changemakers in AI Head Chapter Lead, December 2020 - December 2021**

- Manage 15 AI4ALL chapters by facilitating virtual leadership training sessions and regular meetings to support 30 chapter leads in carrying out community-focused programming
- Serve as liaison between AI4ALL staff and chapter lead team