Abigail Brooks

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Education

University of California, Berkeley May 2025
Bachelor of Arts in Computer Science, Minor in History & Ethnic Studies

Relevant Coursework: Programming Fundamentals, Data Structures, Discrete Math & Probability Theory, Foundations of Data Science, Principles and Techniques of Data Science, Computer Architecture, Database Systems, Computer Security, Human Contexts & Ethics of Data, History of Information

Skills

Languages: Python, Java, C, JavaScript, HTML/CSS, Node, SQL, NoSQL, ExpressJS, Swift, TypeScript, Pandas, Seaborn, sklearn
Technologies: React, AWS, PostgreSQL, GCS, Figma, Postman, XCode, UIKit, gRPC, Maven, Docker, protobuf, kubernetes, Dagger

Experience

Spotify *Software Engineering Intern* May 2023 – August 2023
- Created message receiver and handler for cross-project communication to obtain user data and suspend accounts suspected of fraud to prevent revenue loss, using Java, Google Pub/Sub, gRPC
- Implemented monitoring and alerting for services and deployed services to multiple regions, using Kubernetes, Grafana
- Added React.js hooks to track user interaction within billing system front end for data science team to analyze user behavior

Codebase *Project Manager: Etsy* December 2022 – June 2023
- Worked with Etsy technical staff to create project timeline and spec for a service authored in GoLang using gRPC and protobuf to handle file uploads to Google Cloud Storage, PDF-to-image conversion, with observability & benchmarking
- Managed 6 developers and assigned weekly tasks, scheduled stand up with Etsy, prepared project deliverables, reviewed code, and assisted with technical learning and development

UC Berkeley EECS Department *Undergraduate Student Instructor (CS61A, CS61B)* August 2023 – Present
- Lead and prepare content for weekly labs and discussion sections, assist during office hours, and present lectures on Data Structures, Algorithms, and Object Oriented Programming for students in Computer Algorithms and Data Structures courses
- Assist students in implementing and debugging projects in Java, Python, SQL, BNF, and RegEx

Computer Science Mentors *Diversity, Equity, and Inclusion Chair* January 2023 – Present
- Ensure DEI is prioritized for a non-profit organization providing CS tutoring and support for students at UC Berkeley
- Established monthly newsletter sharing opportunities for underrepresented students in tech, organized office hours, facilitated partnerships with other campus organizations, and managed affinity tutoring sections for students of shared backgrounds

UC Berkeley EECS Department *Research Assistant* November 2023 – Present
Study Group Matching Algorithm
- Member on a team of undergraduate students supervised by Professor Gireeja Ranade researching the use of algorithms to create study groups for students in Undergraduate courses to promote inclusion in the classroom
- Designing and implementing website to facilitate algorithm matching on users local computer using client side storage

Efficacy of DATA 375
- Working under the supervision of Professor Lisa Yan to evaluate the efficacy of a teaching pedagogy course for first time undergraduate student instructors, with an emphasis on student identity, classroom inclusion, and computing pedagogy
- Currently submitting materials to UC Berkeley's Institutional Review Board, creating research plan, and ensuring ethical guidelines for research are met and data collection is secure

Projects

Housing *Python (NumPy, Seaborn, Pandas, sklearn)* May 2023
- Created linear regression model with sklearn to predict the price of homes in Cook County Illinois based on a database of 500,00 homes
- Selected model features using K-fold cross validation and L2 regularization, cleaned and encoded data set

Spam & Ham *Python (NumPy, Seaborn, Pandas, sklearn)* May 2023
- Used sklearn to create a logistic regression model with 87% accuracy to predict if emails were spam emails or legitimate emails