Ali Khani

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LinkedIn — GitHub — Website

EDUCATION

University of California, Berkeley Berkeley, CA

Bachelor's in Computer Science, Bachelor's in Data Science *May 2024*

- **Relevant Coursework:** Data Structures, Algorithms, Coursera ML, Computer Architecture, Techniques of Data Science, Database Systems*, Data Engineering*, Computer Security*.

SKILLS

- **Languages:** Java, Python, C, JavaScript, SQL, C++, HTML/CSS, Golang, Ruby
- **Libraries:** Scikit-learn, NumPy, Pandas, Matplotlib, Plotly, TensorFlow, Bootstrap, React
- **Tools:** Git, GitHub, MongoDB, Next.js, Node.js, Vim, IntelliJ, VSCode, Shell, Linux
- **Soft Skills:** presentation, leadership, collaboration, communication, organization, teaching

EXPERIENCE

Teaching Assistant, Data Structures (CS61B) Berkeley, CA

University of California, Berkeley EECS *Jan 2023 -*

- Taught discussion & lab sections of 40+ students. Improved attendance 25% by offering free food.
- Created Project Party presentations & API guides as resources for student projects and HWs.
- Debugged large-scale projects and resolved issues pertaining to Git workflow, IntelliJ setup & configurations, Gradescope autograder tests, and algorithm implementations.

Head of Technology Berkeley, CA

UC Berkeley Muslim Student Association *Jan 2023 -*

- Managed three project teams: virtual site map & directory for 5 Pillars Islamic Cemetery, a student information system for Hikmah School, and Bootstrap website for Muslim-owned cafe.
- Collaborated with another team of eight Berkeley students to create introductory Python data science curriculum on Google Colab and teach two full-day workshops at Bay Area Islamic schools.

Academic Intern, Data Structures (CS61B) & Berkeley, CA

Academic Intern, Programming Structures (CS61A) *Aug 2022 - Dec 2022*

University of California, Berkeley EECS

- Helped debug labs, HWs, & projects in both of Berkeley's largest courses (2500+ students total).

PROJECTS

Gitlet — *Java*

- Designed and engineered a version-control system emulating features of Git.
- Utilized file persistence, SHA-1 hashing, graph traversals, serialization, and JUnit testing to support nearly 20 commands including commit, checkout, branch, and merge.

Enigma — *Java*

- Built generalized digital simulator of the historic WWII _Enigma encryption machine.
- Implemented data quality improvements in processing over 50 initial machine configuration files, and handled string manipulation, data mapping, and file reading for encryption/decryption.

Build Your Own World — *Java*

- Designed and built 2D tile-based world exploration engine similar to NES game "Zelda II."
- Implemented random world generation, saving & loading games, user interfaces, FOV toggling, etc.

Spam & Ham — *Python*

- 93%-accurate spam email classifier powered by scikit-learn, Pandas, Matplotlib, & Seaborn.

NGordnet — *Java, JavaScript, HTML, CSS*

- Browser-based visualizer to explore word usage history in English texts using NGrams dataset.