Eric Chang

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EDUCATION

University of California, Berkeley   Berkeley, CA
Bachelor of Arts in Computer Science and Statistics   *Expected: May 2023*
- **Relevant Coursework:** Operating Systems, Principles and Techniques of Data Science, Concepts of Statistics, Computer Security, Machine Learning, Algorithms, Computer Programs, Data Structures, Discrete Mathematics and Probability Theory, Machine Structures, Data Science, Information Devices and Systems I & II, Probability, R Programming

SKILLS

Languages: Java, Python, C, SQL, Scheme, JavaScript, HTML/CSS, R, RISC-V Assembly
Frameworks: Node.js, JUnit, Sinon, Jest
Developer Tools: Git, Docker, Vault, Elasticsearch, Jenkins, VS Code, Visual Studio, IntelliJ, LaTeX, NumPy, Octave, Prometheus, Grafana, SWF

EXPERIENCE

Intern - Qualtrics   06/2021 - 08/2021
SDE Intern on the X-Flows Workflows API Team   *Provo, UT*
- Created an internal endpoint for employees to replay batches of workflows that previously failed execution
- Built a new quark worker that consumed messages pertaining to workflow replays and executed the replay script for the specific failed workflow
- Linked the endpoint to the quark worker in Firestorm through Qualtrics's internal messaging producer that automatically ran the existing replay script
- Utilized Jenkins to perform automated pipeline checks on repository pushes and merge requests
- Worked with Amazon's Simple Workflow Service to resume workflow execution
- Shifted original dependency on Redis to Elasticsearch for metadata queries and ripped Redis and Elasticsearch dependency from the replay script to improve efficiency

Junior Mentor - Computer Science Mentors   01/2021 - 05/2021
Data Structures Junior Mentor   *Berkeley, CA*
- Hold weekly 1 hour sections teaching 5-6 people concepts in Data Structures, such as HashMaps, Sorting Algorithms, Dijkstra's, etc., and working through practice problems

Officer - Cal Badminton   06/2020 - present
Social Chair of Cal Badminton   *Berkeley, CA*
- Organize and host club-wide social events, such as retreats and other activities
- Responsible for fostering inclusivity, improving club culture, and maintaining a tight-knit community

Academic Intern - UC Berkeley EECS Department   06/2020 - 08/2020
Data Structures Academic Intern   *Berkeley, CA*
- Helped teach 25+ students course topics such as Dijkstra's, Union-Find, Hashtables, Red-Black Trees, etc.

Research Internship - UC San Diego   06/2018 - 08/2018
Research Intern under Dr. Chung-Kuan Cheng   *San Diego, CA*
- Worked alongside Professor Chung-Kuan Cheng and others on research projects
- Studied the runtime of the All Pairs Minimum Cut brute force solution on randomly generated strongly connected directed graphs
- Researched and tested the viability of a cuff-less blood pressure monitor using a 3-axis accelerometer
- Co-authored two formal papers and published in the journal *Networks* and presented at *IEEE EMBC Conference*

PUBLICATIONS

- Eric Chang, Chung-Kuan Cheng, et al., "Empirical Study on Sufficient Numbers of Minimum Cuts in Strongly Connected Directed Random Graphs," *Networks*, 2020; 76: 106-121.
- Eric Chang, Chung-Kuan Cheng, et al., "Cuff-Less Blood Pressure Monitoring with a 3-Axis Accelerometer," *2019 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Berlin, Germany, 2019, pp. 6834-6837.