VAISHAK KRISHNA

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Education

University of California, Berkeley (GPA: 3.89/4.0) **Aug. 2020 – Present**
In progress: Bachelor of Arts in Computer Science *Berkeley, California*
Honors: Dean's list, Upsilon Pi Epsilon CS Honor Society.

Relevant Coursework

- Data Structures
- Discrete Mathematics and Probability
- Structure and Interpretation of Computer Programs
- Algorithms and Intractable Problems
- Computer Architecture
- Designing Information Devices and Systems
- Operating Systems
- Foundations of Data Science
- Computer Security
- In Progress: Intro Machine Learning
- In Progress: Principles/Techniques of Data Science

Experience

Research **June 2022 – August 2022**
Research Assistant under Dr.Rajagopal Appavu (MD Anderson Cancer Center) *Remote*
- Procured men's prostate cancer **data sets** and clinical trial results for data visualization and drug efficacy analysis.
- Performed in-depth research paper reviews, greatly reducing error frequency and professor workload.

Computer Science Mentors (UC Berkeley) **January 2022 – May 2022**
Mentor *Berkeley, California*
- **Taught data structures concepts and mentored** a group of students weekly with a **4.5/5.0 effectiveness rating**.
- Co-led a task force and **taught** concepts of "Git" and "GitHub" to students.

QBurst **June 2021 – July 2021**
Backend Software Engineer Intern *Remote*
- Developed REST API methods for an internal tool to **securely** and easily access customer lead data in a SQL database.
- Worked with frontend developers to integrate the API into the mobile app and increase ad deployment efficiency.

Projects

Gym Data Visualization | https://rsf-crowd-data.web.app/ *AWS, IPYNB, Firebase* **October 2022 - December 2022**
- Developed a **data visualization** web app to display the **crowd density** of the **UC Berkeley** campus gym.
- Received **97%** positive feedback from **over 200** UC Berkeley students and City of Berkeley residents.
- Coded a **data pipeline** to collect, transform, and store data from the school gym in a **cloud database**.

Wordle Improved | https://wordle-improve.web.app | *JavaScript, React, HTML/CSS, AWS* **May 2022 - September 2022**
- Launched a **responsive, improved** version of the hit game "Wordle" using ReactJS, hosted on an AWS EC2 instance.
- Constructed a < 5 **second** information theory solver that is **97% as good** as the current best solver (3.54 avg guesses).
- Ensured compatibility with **multiple operating systems and browsers** using various Web APIs.
- Deployed the web app for **400+ users** by configuring **Apache HTTP server** on Linux machines in the **cloud**.

EVA Poker AI | *C++, Java, Python* **July 2022 - September 2022**
- Developed an **efficient and intuitive** command-line Texas Hold-em poker simulator in Python for 2-8 players.
- Optimized an iterative **AI solver** (CFR) for Kuhn Poker in C++ (vs. Python) for a **30x speed up** in runtime.
- Designed a **novel version of Poker** to aid the development and debugging of the Texas hold-em solver.

School Projects | *Python, Java, C, Go* **January 2020 - May 2022**
- Developed an **end-to-end encrypted** file storage and retrieval system with filesharing support in Go.
- Implemented **voice recognition** for a robot car using **SVD/PCA and Machine Learning** to classify sound waves.
- Developed an **optimization algorithm** in Python to achieve **5th place out of 220** in an algorithm competition.
- Programmed a two-player PVP game with random world generation in Java using **object-oriented principles.**

Technical Skills

Computer Languages: Python, JavaScript, Java/JUnit, RISC-V Assembly, C/C++, HTML, CSS, Go, C#
Developer Tools: VS Code, IntelliJ, PyCharm, Eclipse, Visual Studio
Technologies/Frameworks: ReactJS, Git/GitHub, Microsoft Azure, Linode, Jyupiter Notebook, Linux, .NET, Django

Other Skills/Hobbies

- Languages: English (Bilingual Proficiency), Malayalam (Bilingual Proficiency), Mandarin Chinese (Limited WP)
- Trombone Performance - Accepted/performed in various ensembles at the school, state, and all-national levels.
- Hobbies - Computer Hardware, Poker Theory, Gaming, Weight Lifting, Rubik's cubing, Cooking