

REECE BAILEY

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EDUCATION

California State University, Fullerton

Bachelor of Science in Computer Science, Minor in CyberSecurity

August 2021 - May 2025, CA

Fullerton, CA

EXPERIENCE

Undergraduate Research Contributor

California State University, Fullerton

May 2023 – July 2023

Fullerton, CA

- Engaged in data preprocessing and augmentation utilizing libraries like NumPy, pandas, Scikit-learn, and more, ensuring optimal input for AI models
- Designed and developed custom tools for data analysis, paving the way for deeper insights and more accurate model evaluations
- Regularly presented findings and progress to academic peers and faculty, highlighting the implications and potential applications of our research

Software Engineer Intern

PolyNexus Global

June 2022 – Feb. 2023

Rancho Santa Margarita, CA

- Assisted in designing and deploying real-time applications for high-frequency trading activities, boosting trading execution speed by 25% and improving system response times.
- Contributed to the scalability of C++ applications, facilitating an increase in the volume of high-frequency trades without performance degradation.
- Collaborated with senior software engineers and quantitative researchers to develop financial analysis and trading tools using Python and Java
- Conducted software QA, identifying and rectifying performance bottlenecks.

PROJECTS

Blockchain Hot Potato | Solidity, Typescript, Next.js, Mongodb, Git, Ethers

April 2023 – Present

- Designed and implemented the game logic in Solidity, ensuring transparent and tamper-proof gameplay on the Ethereum blockchain.
- Utilized Next.js to create an interactive and responsive web interface, allowing users to participate in the game, view the current holder of the "potato," and monitor the countdown timer in real-time
- Developed a leaderboard system using MongoDB, storing and displaying top players based on game wins, ensuring competitive and engaging gameplay.

Rolodex Hash Table | C++, Makefile, Git

Jan. 2023 – Feb. 2023

- Architected the hash table with an emphasis on load factors and rehashing strategies to ensure optimal performance during high-volume operations
- Implemented linked lists for collision resolution, providing effective handling of collisions and maintaining data integrity
- Developed intuitive command-line interfaces for users to input, search, modify, and delete contact records
- Integrated efficient hashing algorithms to swiftly calculate indexes for storing and retrieving records, maximizing search speed

EXTRACURRICULAR ACTIVITIES

President, Blockchain Club

California State University, Fullerton

Aug. 2023 – Present

Fullerton, CA

- Led and managed 70 club members in bi-weekly club socials.
- Achieved a 40 percent membership growth during my tenure, expanding the club from 50 to 70 active members.
- Partnered with Harvard University peers to merge the Blockchain Club and Artificial Intelligence Club, fostering interdisciplinary innovation.

TECHNICAL SKILLS

Languages: Python, C/C++, JavaScript, TypeScript, SQL (Postgres), HTML/CSS, Solidity, Rust

Frameworks: React, Node.js, Flask, JUnit, WordPress, Hardhat, FastAPI

Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, PyCharm

Libraries: pandas, NumPy, Matplotlib, Ethers.js, OpenZeppelin