

Connor Bernard

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EDUCATION

- **University of California, Berkeley** Berkeley, CA
Bachelor of Computer Science; GPA: 3.94 *Expected May 2024*
Courses: Data Structures (CS61B), Efficient Algorithms and Intractable Problems (CS170), Machine Structures (CS61C), Intro to Databases (CS186), Computer Security (CS161), Web Design (CS198), Discrete Mathematics and Probability (CS70)

TECHNICAL SKILLS

- **Languages:** Python, JavaScript, C, Java, Go, React, Node, HTML, CSS, PHP, JUnit, SQL, MongoDB, Shell Scripting, Lisp
- **Tools:** Git, Jira, Docker, Postman, phpMyAdmin, MySQL, Linux, Jenkins, Xcode, Github, Gitlab, MAMP, , Vim, Figma
- **Soft Skills:** Communication, Self-Awareness, Determination, Time Management, Teamwork, Adaptability, Creativity

EXPERIENCE

- **Cisco** San Jose, CA
Software Engineering Intern *June 2023 - Present*
 - **Umbrella FedRAMP:** Developed multiple secure endpoints for a government and commercial cloud security API in PHP used to protect 840,000 networks, 67 million mailboxes, and 87 million endpoints against 7.2 trillion attacks annually.
 - **Umbrella BFG:** Developed both internal and customer-facing dashboard pages and UI improvements using React JS.
- **University of California, Berkeley** Berkeley, CA
Research Assistant and Research Group Lead *December 2022 - Present*
 - **Researcher:** Conducted research in Computer Science education seeking to naturalize the testing process to optimize for student success by removing time limits and exploring exam "superscoring" in a standard classroom environment.
 - **Group Lead:** Built and led a team of computer engineers on a research project aimed towards facilitating grade-level equality initially within computer science at UC Berkeley through webapps, but with the intention to expand throughout academia.
- **Emotewell Inc.** Berkeley, CA
Software Engineering Tech Lead *August 2022 - June 2023*
 - **Team Lead:** Mentored and managed a team of junior developers working on back-end, web-development, and mobile-development through weekly meetings to strategize agile approaches to outstanding tickets and pull requests.
 - **REST API Development:** Developed a PHP REST API using Postman and Cloudflare DNS with endpoints for mobile In-App-Purchase verification, user validation, natural language processing (NLP), and front-end platform customization.
 - **Website and Mobile Optimization:** Decreased website load speed by over 53% and increased maximum server load by over 35% by implementing caching and compression techniques to fit complex computational models generated through load time analysis and offensive load testing.
 - **Mobile App Development:** Used Swift to develop and push the first version of the Emotewell App in under two weeks.
- **Emotewell Inc.** Berkeley, CA
Software Engineering Intern *May 2021 - August 2022*
 - **Website Redesign:** Used CSS, HTML, JS, PHP, and Figma to implement and handle a full scale website redesign event.
 - **SEO Optimization:** Applied statistical modeling and advanced regression techniques to increase SEO score by 30%.
 - **Website Asset Optimization:** Implemented loading algorithms such as Lazy-Load and image compression.
- **Computer Science Tutor** San Mateo, CA | Berkeley, CA
AP CS, CS61A, CS61B, CS61C, CS170 *May 2019 - June 2023*

ACADEMIC PROJECTS

- **End-to-End File Sharing Platform:** Used Go to create an end-to-end encrypted file sharing platform like Google Drive with a public-key database TCB and otherwise public storage leveraging RSA PKE, PBKDF, HashKDF, digital signatures, HMACs, and AES-CTR symmetric encryption to ensure IND-CPA, authenticity, and integrity of all private data.
- **Streamlined Git-style VCS:** Used Java to create a version-control system that mimics some of the features of Git including active directory moderation, file hashing, merge conflict handling, and remote repository interactions.
- **Intelligent Grade Portal:** Developed a secure grade portal using Node to create a REST API and handle OAuth authentication and React to allow professors to easily update their grades and enable students to project their future success in the class.
- **AI Graph Clustering:** Used machine-level parallelism as well as artificial intelligence techniques including simulated annealing to optimally cluster nodes on hundreds of graphs each with thousands of nodes in accordance with several nonlinear constraints.
- **Italian Restaurant Website Redesign:** Used HTML, CSS, JS, and PHP to create an updated website for a popular restaurant in Berkeley using data structures, prototype design techniques, and HTTP requests to dynamically populate menu items.

CLUBS AND AFFILIATIONS

- The International Honor Society for the Computing Sciences (UPE): Members selected from the top 20% of CS students.
- Computer Science Undergraduate Association (CSUA)
- Institute of Electrical and Electronics Engineers (IEEE)