Connor Bernard

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Education

- **University of California, Berkeley** — Berkeley, CA
  Bachelor of Computer Science; GPA: 3.93 — *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, Java, C, JavaScript, React, Node, HTML, CSS, PHP, Objective-C, SQL, Shell Scripting, Lisp
- **Tools**: GIT, JIRA, XCode, Postman, phpMyAdmin, mySQL, Docker, Linux, Github, BitBucket, MAMP, Vim, Figma
- **Soft Skills**: Communication, Self-Awareness, Determination, Time Management, Teamwork, Adaptability, Creativity

Experience

- **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 — *May 2022 - Present*
  - **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 - May 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, asynchronous and delayed JavaScript loading, and image compression.
- **Computer Science Tutor** — San Mateo, CA | Berkeley, CA
  AP CS, CS61A, CS61B, CS61C, CS170 — *May 2019 - Present*
  - **Tutor and Review Session Host**: Tutored peers in one-on-one environments and led several full-class exam-prep sessions on advanced algorithms, data structures, and complex run-time analysis as well as co-taught several classes.

Academic Projects

- **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.
- **Scheme Interpreter**: Used the functional programming language Scheme (a Lisp dialect) in conjunction with Python to write a pseudo-self interpreter and Read-Eval-Print Loop (REPL) environment for Scheme.
- **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)
- National Institution for Leadership and Success (NSLS)