Sid Pallerla

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EDUCATION

University of California, Berkeley — Berkeley, CA
Bachelor of Arts in Computer Science — *Aug 2022 - May 2026*

Relevant Coursework: Data Structures and Algorithms, Computer Architecture, Efficient Algorithms and Intractable Problems, Structure and Interpretation of Computer Programs, Linear Algebra, Foundations of Data Science, Discrete Mathematics and Probability

EXPERIENCE

Software Engineer Intern — May 2024 – Aug 2024
Redapt Inc — *Woodinvile, WA*

- Enabled the marketing team to produce **25%** more content per month by providing instant access to accurate company information by developing a **retrieval-augmented generation (RAG) model**
- Reduced data storage requirement by over **55%** by developing **web scraping tool** using **Beautiful Soup** and Google Search API
- Developed an extractive text summarization model using **PyTorch's HuggingFace Transformers library** to analyze and summarize the scraped data
- Built an interactive frontend for the web scraping tool using **React**, allowing marketing analysts to easily input parameters and view results
- **Dockerized** applications to run on **Kubernetes, EKS on AWS**, as an internal service and wrote deployment, service, and scaling yamls by collaborating with the release team

Undergraduate Academic Intern — Jan 2024 – May 2024
University of California, Berkeley EECS Department — *Berkeley, CA*

- Assisted with teaching and mentoring students in CS61B, an advanced data structures and algorithms course
- Facilitated weekly lab sessions with **25+** students, providing guidance to students in solving programming problems
- Designed course materials, including **10+** programming assignments, **50+** practice problems, and **3** exams

Undergraduate Researcher — Jan 2024 – May 2024
Berkeley Laboratory for Usable and Experimental Security (BLUES) — *Berkeley, CA*

- Achieved a **61% improvement** in efficiency for security protocol implementation and testing within the lab by developing a Java mobile application and corresponding SDK
- Analyzed data of over 50 participants in a research study using MATLAB and Python
- Participated in the literary review and contributed to a research paper on computer security protocols

TECHNICAL SKILLS

Languages: Python, Java, Javascript, SQL, C
Frameworks/Libaries: React, Pytorch, Beautiful Soup, Pandas, Flask
Others: GIT, AWS, Linux, Docker, Kubernetes, CSS, HTML

PROJECTS

2048 Game |*C, REACT*

- Implemented core 2048 game logic in C, including tile movement, merging functionality, random tile generation, and game state management
- Built the React frontend with a dynamic UI, utilizing CSS grids to display the 4x4 game board and handling keyboard inputs for tile movement
- Integrated the C backend with the **React** frontend using **RESTful APIs**, allowing the frontend to send player actions and retrieve the updated game state in real-time

Reddit Comment Bot |*Python Reddit API Wrapper, Python*

- Developed a Reddit bot using Python and **PRAW (Python Reddit API Wrapper)** library to automate responses based on specific phrases/triggers
- Deployed on **Heroku** to automate Reddit interactions, achieving a maximum of **200** comment replies daily