Jimmy Li

jimmy.li@berkeley.edu | (909)-336-8620 | https://jimmyli.us

Education

University of California, Berkeley - Berkeley, CA **August 2020 - May 2024**
B.A. Computer Science, GPA: 4.00
Relevant Coursework: Structure & Interpretation of Computer Programs, Data Structures and Algorithms, Advanced Algorithms, Operating Systems, Computer Architecture, Discrete Mathematics and Probability Theory

Technical Skills

Languages: Python, Java, Golang, C, C++, PHP, HTML, CSS, JavaScript, TypeScript, SQL
Technologies: Unix, Git, Docker, ReactJS, NodeJS, MySQL, NoSQL, GraphQL, Redis, PyTorch, AWS, GCP, Kubernetes, Terraform, Airflow, Splunk, SparkSQL

Experience

Pinterest - Software Engineering Intern **May 2022 - August 2022**
- Designed a Python workflow to analyze 15 million daily secret key requests and suggest improved access policies
- Improved observability of secret key usage by sending metrics from golang client used by all machines in the fleet
- Developed web interface to streamline accessing policy suggestions data from S3 using Typescript and NextJS

Relentlo - Software Engineer **August 2021 - May 2022**
- Implemented a write-behind database caching layer, reducing costs by 10x and improving throughput by 5x
- Architected a real-time ad exchange in golang handling 3000 requests per second with 200ms latency requirements
- Migrated infrastructure from Firebase to Terraform and Kubernetes, improving reliability and scalability
- Designed CI/CD pipelines to automatically build, upload, and deploy Docker images to Kubernetes
- Collaborated closely with design team using Figma to re-imagine and implement new landing page in ReactJS

Hatch - Software Engineering Intern **June 2021 - August 2021**
- Improved login flow by integrating Google OAuth as a sign-on provider reducing sign-on to just 1 click
- Integrated user authentication with AWS IAM to secure backend api access with access control levels
- Worked across the full stack with AWS Lambda, Cognito, RDS, and GraphQL to write highly scalable features

California State University, Fullerton - Research Intern **June 2019 - August 2019**
- Researched computational methods of detecting cyber intrusion using machine learning and statistics
- Experimented with decision trees and neural networks, achieving 97% accuracy on the KDDCup'99 dataset
- Designed an algorithm using 3D spatial relations to template and efficiently match motifs in unexplored proteins

Projects

Phodexr | *Python, Pytorch, HTML, Javascript* **August 2021 - December 2021**
- Managed a team of 5 to research deep learning approaches for connecting images and text in a zero-shot manner
- Explored large scale pre-training with CLIP and embedding indexing for scalable similarity searching
- Created a frontend to interface with multiple models served via FastAPI, allowing anyone to test the models

GuessrApp | *ReactJS, NodeJS, Redis, PostgreSQL* **April 2021**
- Designed a horizontally scalable, real-time song guessing game by working across the full stack
- Implemented the frontend using ReactJS and used NodeJS, PostgreSQL, Redis, and WebSockets for the real-time and distributed backend. Backend also integrates with the Spotify API for song data.
- Deployed production application to Kubernetes on GKE with docker images stored in Google Artifact Registry

Activities

UC Berkeley Launchpad - Webmaster and Project Leader **September 2020 - Present**
- Worked with various teams to design and deploy machine learning models which solve real world problems
- Organized weekly project meetings and provided technical guidance to other project leaders and members
- Improved website loading times and developed a role management system using Django

Capture the Flag Security Competitions **September 2018 - Present**
- Compete as an application security specialist and find security vulnerabilities in challenging applications
- Finalist in GoogleCTF and DefconCTF and reported real world vulnerabilities to Google VRP
- Organized and wrote security challenges for RedpwnCTF and DiceCTF reaching over 15,000 participants
- Managed and supported infrastructure used to host vulnerable services using Kubernetes and Terraform

Awards

DEFCON CTF Finalist **April 2022**
M3 Math Modeling Competition Technical Computing Award Runner Up **March 2020**
- Implemented a greedy MCLP algorithm to optimally place vehicle charging stations

United States of America Computing Olympiad Gold Division **March 2019**