

KOOROUS VARGHA

Full Stack Software Engineer

kvargha.com | koorousvargha@gmail.com | linkedin.com/in/kvargha | github.com/kvargha

EXPERIENCE

Software Developer

The Genomics Institute

Aug. 2021 – Present

Santa Cruz, CA

GCP, Kubernetes, Docker, React.js, Express.js, Node.js, Flask, Python, TypeScript, JavaScript, HTML, CSS, SQL, NoSQL

- Developed a React web app that reduced data aggregation times by 99%, through creating an Express.js REST API and writing database queries against Google Cloud Datastore and Snowflake.
- Designed Kubernetes clusters with load balancing that improved latency by 73% and resulted in a 50% decrease in infrastructure costs; achieved a 99.5% uptime by leveraging health checks.
- Implemented a REST API that graphs COVID-19 tests onto a tree data structure, enabling scientists to efficiently analyze outbreaks, utilizing Flask and Docker. Reduced duplicate requests times by 99% using Redis caching.
- Automated the building, testing, and deploying of applications, cutting deployment times by 50%, by creating CI/CD pipelines using GitHub Actions and Google Cloud Build.
- Minimized bugs by writing end-to-end and integration tests with a minimum of 90% code coverage using Cypress and the Python unit test framework.

Lead Programmer Intern

LEEPS Lab

Oct. 2020 – Aug. 2021

Santa Cruz, CA

Django, Python, JavaScript, HTML, CSS, PostgreSQL, Redis, DigitalOcean

- Developed a web-based high-frequency trading platform, supporting up to 1000 transactions per second, by creating a REST API in Django to interface with a PostgreSQL database and Redis as an in-memory data store.
- Optimized a stock market simulator, resulting in a 93% decrease in execution time, by utilizing multiprocessing.
- Maintained high team velocity by mentoring 5 interns through code reviews, and reduced onboarding time by creating comprehensive documentation.

Programmer Intern

LEEPS Lab

May 2020 – Oct. 2020

Santa Cruz, CA

Django, Python, JavaScript, HTML, CSS, PostgreSQL, DigitalOcean

- Migrated experiments to the cloud, which increased concurrent studies by 300%, using DigitalOcean Linux servers.
- Improved server efficiency by consolidating processes into bash scripts and automating them using CRON.
- Visualized stock market data that decreased analysis time by creating graphs using Python and Matplotlib.

EDUCATION

University of California, Santa Cruz

Bachelor of Science in Computer Science

Graduated March 2021

3.50 GPA

Coursework: Distributed Systems, Web Applications, Databases, Computer Networking, Machine Learning

PROJECTS

Gmail Clone | *React.js, Material-UI, JavaScript, HTML, CSS, Express.js, Node.js, Docker, PostgreSQL*

Dec. 2020

- Built a responsive email app using React.js and Material-UI, containerized using Docker.
- Created a REST API using Express.js to communicate with a PostgreSQL database.
- Added user login, which improved user privacy and security, by integrating JSON Web Tokens (JWT).

AmberDash | *Python, Flask, JavaScript, HTML, CSS, Firebase (NoSQL)*

Jan. 2020

- Awarded "Best Use of Google Cloud" out of 300+ projects by Google at CruzHacks 2020.
- Built a dynamic dashboard that plotted recent amber alert sightings onto Google Maps, detected by a Google Vision-enabled Android app, by creating a Flask API that made database queries to Firebase.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, HTML, CSS, SQL (PostgreSQL), NoSQL, Java, Go

Frameworks/Libraries: Kubernetes, Docker, React.js, Material-UI, Express.js, Node.js, Django, Flask, Jest, Cypress

Cloud Services: Google Cloud Platform (GCP), Amazon Web Services (AWS), DigitalOcean