Koorous Vargha

Software Engineer

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A recent graduate of Computer Science with honors and hands-on experience in the full-stack of software development, resolving the execution time issues and debugging.

KEY SKILLS

Languages: Python, C, JavaScript, Java, Golang, PostgreSQL, NoSQL, HTML, CSS
Cloud Services: Amazon Web Services (AWS), Google Cloud Platform, DigitalOcean, Cloudflare
Libraries/Tools: Docker, Django/Flask, React, Material-UI, Polymer, Tensorflow, Express, Node.js, OpenAPI, LaTeX
Soft Skills: Project Management, Effective Communication, Public Speaking, Critical Thinking

EDUCATION

University of California, Santa Cruz Graduated: March 2021
Bachelor of Science in Computer Science with Honors GPA: 3.50
Relevant Coursework: Distributed Systems, Operating Systems, Web Applications, Database Systems, Computer Networking, Machine Learning, Data Structures, Algorithms, Computer Architecture, Functional Programming, Calculus, Linear Algebra, Probability Theory, Computational Models, Technical Writing

INTERNSHIP

Lead Programmer - *UCSC LEEPS Lab, Santa Cruz* May 2020 - Present

- Optimized legacy applications by implementing asynchronous processes through parallelism
- Migrated economic experiments to the cloud utilizing DigitalOcean Linux servers
- Visualized stock market simulation data using Matplotlib, Pandas, and Numpy
- Built multiplayer full-stack high-frequency trading economic experiments using Django and Polymer
- Developed robust RESTful APIs and implemented performance testing suites
- Frequently communicated with lab directors to discuss project deadlines and features

PROJECTS

AmberDash: 1st Place Google Cloud Category - *CruzHacks 2020*

- An Android app that matched nearby cars with Google Vision with active amber alerts stored on Firebase
- Created dashboard with Flask to pull data from Firebase to display recent coordinates onto Google Maps

GPU Stock Checker - *Personal Project*

- Developed with Python requests, deployed on AWS EC2, and delivers push notifications with AWS SNS

Gmail Clone - *Class Project*

- Built responsive full-stack application using React and Material-UI in a Docker environment
- Wrote automated unit tests with Puppeteer and Jest; used JSON Web Tokens for user authentication
- Created robust RESTful APIs with Node.js and Express to communicate with a PostgreSQL database

Distributed Database - *Class Project*

- A distributed key-value datastore using Golang hosted within a network of Docker containers
- Improved fault-tolerance through data sharding/node replication, and wrote load balancing algorithms

Image Recognition - *Class Project*

- Built convolutional neural networks from scratch using Tensorflow to classify pre-processed images
- Utilized pre-trained neural network models and dropout techniques to increase model accuracy
- Visualized model loss and accuracy using Matplotlib, Pandas, and Numpy

Django Blog - *Personal Project*

- A full-stack blog using Django that handled multi-user authentication and custom blog posts
- Deployed to AWS using Elastic Beanstalk and S3 that can scale to over 100,000 users