Koorous Vargha

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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, Computing Networking, Machine Learning, Data Structures, Algorithms, Computer Architecture, Functional Programming, Calculus, Linear Algebra, Probability Theory, Computational Models, Technical Writing

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

EXPERIENCE

Lab Manager / Programmer Intern - *UCSC LEEPS Lab, Santa Cruz*   May 2020 - Present
- Modernized 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 and Numpy
- Built multiplayer full-stack high-frequency trading economic experiments using Django and Polymer
- Developed robust RESTful API's and implemented performance testing suites
- Frequently communicated with Lab Directors to discuss project deadlines and features

Technology Chair - *Circle K International, Santa Cruz*   May 2018 - May 2019
- Developed a website optimized through SEO that served 50 daily active users
- Raised newsletter subscriptions from 400 to over 550 through advertising at club recruitment events

PROJECTS

Gmail Clone - *Class Project*   Dec. 2020
- Built responsive full-stack application using React and Material-UI in a Docker environment
- Wrote automated unit tests with Puppeteer, and used JSON Web Tokens for user authentication
- Created robust RESTful API's with Node.js and Express to communicate with a PostgreSQL database

AmberDash: 1st Place Google Cloud Category - *CruzHacks 2020*   Jan. 2020
- An Android app that matched nearby cars with Google Vision with active amber alerts on Firebase
- Created dashboard with Flask to pull data from Firebase to display recent coordinates onto Google Maps

Distributed Database - *Class Project*   March 2020 - June 2020
- 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*   May 2020
- 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 and Numpy

Django Blog - *Personal Project*   July 2019 - Aug. 2019
- 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