

# Koorous Vargha

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## EDUCATION

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**University of California, Santa Cruz**

Expected Graduation: March 2021

Bachelor of Science in Computer Science

GPA: 3.49

**Relevant Coursework:** Distributed Systems, Operating Systems, Web Applications, Database Systems, Machine Learning, Data Structures, Algorithms, Computer Architecture, Functional Programming, Calculus, Linear Algebra, Computational Models, Discrete Math, Probability Theory

## SKILLS

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**Languages:** Python, C, JavaScript, Java, Golang, PostgreSQL, HTML, CSS

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

**Libraries and Tools:** Docker, Django, Flask, React, Material-UI, Polymer, Tensorflow, Express, Node.js, OpenAPI

## EXPERIENCE

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**Lab Manager / Programmer Intern - LEEPS Lab, Santa Cruz**

May 2020 - Present

- Coordinate and lead weekly Zoom meetings with staff and provide support for new recruits
- Building multiplayer full-stack high-frequency trading economic experiments using Django and Polymer
- Maintaining 3 Linux DigitalOcean servers and consolidate multiple processes with bash scripts
- Parallelized processing and visualizing stock market simulation data through Matplotlib and Numpy

**Reader - Tech4Good Lab, Santa Cruz**

April 2020 - June 2020

- Performed analytical research into the field of the safety of autonomous vehicles

**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

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**Gmail Clone - Web Applications**

Dec. 2020

- Built responsive full-stack application using React and Material-UI in a Docker environment
- Created a RESTful API with Node.js and Express to communicate with the 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 and node replication

**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

**Django Blog - Personal Project**

July 2019 - Aug. 2019

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

## EXTRACURRICULARS

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**General Member - Circle K International**

Sept. 2017 - Present

- Awarded Bronze Status through annually accumulating 50 hours of community service