

# Keerthana Routhu

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## Education

**University of California, Santa Cruz** | B.S. in Computer Science | B.A. in Computational Mathematics **Jun. 2021**  
**Coursework** | Abstract Data Types, Analysis of Algorithms, Comparative Programming Languages, Computational Models, Database Systems, Graph Theory, Machine Learning, Number Theory, Principles of Computer Systems Design, Software Engineering

## Experience

**Performance Engineer** | Coupa Software, San Mateo, CA **Sep. 2019 – Dec. 2019**

- Increased prediction accuracy by providing live data access to the performance prediction service from InfluxDB and MySQL databases
- Ensured accurate data flow so service could pull data from the database by using Postman, Kibana, and Jenkins to test and debug builds of project
- Repurposed research and models involved with performance prediction service to design a tool that is projected to cut down company costs by 10%

**Performance Engineering Intern** | Coupa Software, San Mateo, CA **Jun. 2019 – Sep. 2019**

- Increased customer success by creating a performance prediction service that streamlines internal workflow by estimating response time of a requisition, impacting service performance for over 700 customers
- Drove the research involved in finding various performance models on the market and integrated other formulas to transform current performance models to apply to customer needs
- Proved validity of the transformed models and implemented polynomial regression, K-Fold Cross Validation, and various statistical analysis tests in GoLang, leading to a prediction accuracy of over 92%

## Projects & Leadership

**TreeHouse** | Project Lead | Web Application | React, Firebase

- Creating a website to match reliable tenants with reliable housing/landlords based on what user is looking for
- Maintaining a Firebase backend, using Firebase authentication for managing users, using React to create frontend

**Period Helper – 1<sup>st</sup> Place Amazon Challenge, CruzHacks** | Alexa Skill | AWS, JavaScript

- Created an Amazon Alexa Skill using Node.js using AWS Lambda so user can easily and efficiently record their health statistics in menstrual tracking apps
- Won 1<sup>st</sup> place in the Amazon sponsored challenge at CruzHacks and presented to 300 people at Santa Cruz New Tech Meetup

**Yelp Review Predictor** | Machine Learning | Python

- Created a Python program that predicts the rating based on the customer's text review using the Yelp API
- Used Natural Language Toolkit to create a positive versus negative language feature and trained the model using K-Nearest Neighbors algorithm from scikit-learn

**Math Club** | Founder & Instructor

- Founded a pro-bono after-school math club at local elementary school to prepare students for Math Olympiad and AMC contests
- Created a curriculum and taught over 40 students, leading many to place in top 10 percentile in math contests

## Skills

<b>Languages</b>	Java, C, JavaScript, GoLang, HTML/CSS, Python, SQL, Haskell, Octave
<b>Tools</b>	Bash, Git, React, Firebase, Jenkins, Kibana, Postman, AWS Lambda, Node.js
<b>OS</b>	macOS, Ubuntu

## Awards

**CruzHacks** Amazon Alexa Skills Challenge – **1<sup>st</sup> Place**  
**Dean's List** Fall 2017, Winter 2018, Fall 2018, Winter 2019