

ANA SELVARAJ

La Jolla, CA

Github: ana13S

<https://ana13s.github.io/>

OBJECTIVE

Prospective CS graduate student seeking summer 2021 internship.

EDUCATION

University of California, San Diego

July 2017 - June 2021 (Expected), B.S. COMPUTER SCIENCE, GPA: **3.967** (Provost Honors for all quarters)

SKILLS

C++ Python Java Javascript C# C React Node.js SQL Swift
Docker Kubernetes Istio MongoDB OpenGL AWS (EC2, Amplify, Lambda, S3)

EXPERIENCE

VMware— *Software Engineering Intern*

June 2020 - September 2020

- Developed a RESTful API microservice using **ASP.NET Core** to detect conflicts between device installation workflows represented by ASL (Amazon States Language) in VMware's UEM product.
- Created extensive unit, integration, and load tests using **xUnit** and **Locust**.
- Optimized key algorithms in **ASP.NET Core** services using multi-threading to reduce runtime by half.

Mitchell International— *Software Engineering Intern*

June 2019 - September 2019

- Formulated a proof of concept for the breakdown of monolithic **JBoss** API integration services into microservice-style **Kubernetes** pods. Implemented traffic routing, telemetry, authentication and extensive logging of the clusters with the service mesh **Istio**.
- Developed file utilities in **Java** to test the mapping of data fields in XML files.
- Developed API microservices in **Spring** with test cases automated in Microsoft Test Manager.

UCSD Computer Science and Engineering Department — *CSE 120 Teaching Assistant*

September 2019 - December 2019

- Delivered lectures on class assignments and operating system concepts to around 30 students.
- Assisted students by troubleshooting and debugging **OS** projects.

Sysvine Technologies— *Software Engineering Intern*

May 2015; May 2016; May 2017

- Developed and debugged a commercial hospital management application in **Java** impacting around 150 patients.
- Redesigned UI in a **Javascript** enterprise web application.

COMPETITIONS/PROJECTS

Komrade's Kitchen

https://www.youtube.com/watch?v=kt68iuyPuaU&ab_channel=TheQualcommInstitute

- Gameplay developer for a multiplayer, free-for-all cooking game built with **C++**, **OpenGL**, **sfml** and **ImGui**
- Coded UI interfaces, player movement, player-object interactions, game logic, and sound design.

LAHacks 2020 - 95Defender

<https://www.95defender.space/>

- Developed a web app that 'photoshops' N95 masks onto faces in images using the **dlib** and **open-cv** Machine Learning libraries with **React.js**, **Javascript** and **Python**.
- Designed the UI and dockerized the back-end API to be portable and lightweight. Utilized **AWS Amplify** to host the front-end React app and an **AWS EC2** container to host the **Docker** image of the API.

Road Conditions vs Accidents

<https://ana13s.github.io/road-condition-vs-accidents/>

- Mined, cleaned and analyzed data on car accidents and road conditions in San Diego with Google's Geocoding API in **Python**.
- Developed an algorithm to geospatially map each accident to a road with the haversine formula and visualized the results using **geopandas**.