

# Aryaman P. Singh

San Diego, CA

aps010@ucsd.edu | [aryamanpsingh.github.io](https://github.com/aryamanpsingh) | 213-420-9792

## EDUCATION

UC San Diego

**DEGREE:** B.S **MAJOR:** Applied Math

## RELEVANT COURSEWORK

- Data Structures & Object Oriented Design
- Math for Algorithms & Systems
- Combinatorics, Statistics, Data Analysis w/ R

## SKILLS

- **Programming** – Python, Java, C++
- **Math** – R, Matlab, Pandas
- **Web** – JavaScript, HTML, CSS
- **Cloud** – AWS, GCP, Kubernetes, Docker
- **Frontend** – ReactJS, Redux
- **Backend** – Django, Flask, PostgreSQL

## WORK EXPERIENCE

### Hadoolytics

April 2021 - Present

Software Engineer Intern

- Worked with a team that helped businesses migrate their applications from legacy servers to **Kubernetes** clusters installed on **AWS EC2** instances.
- Architected the backend of a policy management tool for software deployed on **Kubernetes** clusters on **GCP**.
  - Installed a server instance of the **Grafeas metadata API** on the cluster which is used to store vulnerability scan reports and attestations.
  - Installed a **Kritis binary authorization webhook** on the cluster, which is configured to query the **Grafeas API** to ensure vulnerability and attestation requirements are satisfied.
  - Set up a **Kubernetes CronJob** for continuous vulnerability scanning of the images pushed to pods which flags bad pods for attention.

## PROJECTS

### Stat90 ([143.110.225.43](https://143.110.225.43))

2020

*Visualization tool for soccer statistics.*

- Developed a **React** progressive web-app which uses **Chart.js** to provide an interactive visualization tool for soccer stats.
- Set up a weekly cron job which scrapes data using **Selenium**, stores it in a CSV and populates the **PostgreSQL** database.
- Set up a **Django REST API** to serve the data.

### IronLog ([143.110.146.187](https://143.110.146.187))

2020

*Fitness tracker to create and modify routines.*

- Progressive Web App implemented in **React** using **Redux** for state management and **Knox** for token authentication.
- Created a **Django** backend which utilizes many-to-many model relationships allowing users multiple start-points to their log and reducing database redundancy.

### Reddit.Record

2019

*Explore a term's sentiment and popularity on Reddit by subreddit.*

- Built a **Flask** web-app which generates graphs using **PyPlot** and **Bokeh**.
- Implemented **PushShift API** to collect data from Reddit and used **NLTK** to analyze the sentiment of the vectorized data.

### Position Predictor

2018

*Predicts position based on skill values.*

- Developed a **Flask** web-app which predicts the user's soccer position based on entered attributes.
- Trained a Classifier model, applied **Principle Component Analysis** reducing a 51 feature dataset to 11 while maintaining 92% accuracy.

