

# Kunj Shah

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## EDUCATION

### California State University, Northridge

Masters in Computer Science, Cumulative GPA: 3.6/4.0.

Los Angeles, CA, USA

August 2021 - May 2023

### MIT Art, Design, and Technology School of Engineering

Bachelors in computer science, Cumulative GPA: 8.5/10.0.

Pune, MH, India

August 2017 - August 2020

## PROFESSIONAL EXPERIENCE

### Sharper Shape

Software Engineer Intern

June 2022 - Present

San Jose, CA

- Used Python and **AWS CDK** to integrate **S3**, **SNS**, **SQS**, and **DLQ** and **Lambda** functions to trigger actions depending upon bucket events.
- Integrated Slack SDK to inform company's designated channel upon completion of an S3 event and Lambda failure. Utilized Amazon S3 Usage Report to calculate client based S3 usage.
- Developed a React interface that enables the import of CSV files before uploading them to an S3 bucket, triggering Lambda functions.
- Built CI/CD pipelines for service & underlying resources, facilitating seamless integration and release of changes.

### Expertrons

Software Developer

December 2020 - May 2021

Mumbai

- Collaborated with an **Agile Scrum** team of 6 members in developing a mobile app using **MERN** stack (React Native, Redux-Saga, and NodeJS)
- Implemented video caching, resulting in a 12% reduction in load time, and FFMPEG for video compression, resulting in a 41% reduction in transmission bandwidth.
- Used MongoDB indexing for faster searching and **aggregates** for complex queries. Contributed to **AWS setup** and migration, including building microservices and optimizing costs by 10%.
- Proposed and installed an on-premises version of Sentry for efficient tracking of bugs and issues across all platforms.

### Geekwork

Backend Developer Intern

December 2019 - March 2020

Mumbai

- Contributed to AGV mobility and collision avoidance while working on **ROS**, **Dijkstra's algorithm**, and the **A\*** algorithm for pathfinding.
- Integrated APIs such as One drive, Google Drive, and Slack.
- Designed an ETL process to extract data from cloud APIs, used Apache Tika to process the data, and stored the results in **Elastic Search**.

## PROJECTS

### Sign Language Detection

November 2021

- Programmed a solution that eases communication with the Deaf and Dumb by translating hand sign language to text and speech. Mediapipe for posing and configuring the baseline Long-Short Term Memory **LSTM** for ML model with 89% accuracy.

### Swachh - AI-enabled citizen grievance reporting system

September 2020

- An application that enables a user to report any grievance by clicking pictures, and the system detects the issues using PyTorch and CNN to build image classification with 91% accuracy and reports to nearby authorities depending on the user's location.

### India-location-details - Open-source

July 2020

- **india-location-details**- Developed an NPM package, to find details of Indian regions by zip code, cities, and states.

### Automated Guided Vehicle

March 2020

- Developed an Automated Guided Vehicle utilizing ROS and Python for logistic operations. Created a 2D cost map using lidar sensor data.
- Acquired proficiency in ROS fundamentals, including working with Lidar, utilizing the publisher-subscriber model for device communication, and sockets. Utilized Lidar data to generate and plot maps of the area. Employed Gazebo for visualization of AGV movements.

## SKILLS

- **Languages & Databases:** Python, Typescript, Javascript, Java, C++ | MongoDB, MySQL, PostgreSQL.
- **Web Frameworks & Libraries:** NodeJS, REST APIs, GraphQL, React, Redux-Saga, Flask, Django, HTML, CSS3, Bootstrap.
- **Others:** System Design, Database Design, Git, AWS, Google Cloud, ElasticSearch, FastAi, Tensorflow, Docker, Terraform, Kubernetes, Firebase, Postman, Jenkins, Jira, Sentry, FFMPEG, ROS, Microservice architecture pattern.