Kunj Shah

Junior Software Engineer
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Profile Summary

- Junior Software Engineer with over 4 years of experience, delivering projects encompassing drowsiness detection, sign language detection, and automated guided vehicles, while demonstrating expertise in software engineering domains such as computer vision, machine learning, and cloud computing.
- Skillful developer with proficiency in programming languages (Python, JavaScript/TypeScript, Java), frameworks (React, Node.js, Flask), and cloud services (AWS, Google Cloud, Firebase), showcasing exceptional technical skills in software development and architecture.
- Adept learner with the ability to quickly acquire and master new skills, and enthusiastic problem-solver confident in proposing original and ingenious solutions.
- Engaged collaborator with strong interpersonal skills, able to influence and align multiple teams with conflicting priorities to drive progress under aggressive time constraints.

Education

California State University, Northridge
M.Sc. in Computer Science
Los Angeles, CA, 2021-2023 (expected) **GPA: 3.6/4.0**

MIT Art, Design, and Technology School of Engineering
B.Sc. in Computer Science
Pune, MH, India, 2017-2020 **GPA: 8.5/10.0**

Languages

English: Fluent **Hindi**: Native

Technical skills

Languages: Python, JavaScript/TypeScript, Java, C++, HTML, CSS
Frameworks & Libraries: React, Node.js, Redux-Saga, Next.js, Flask, Django, Scikit-learn, Numpy, OpenCV, Matplotlib, Bootstrap
Databases: MySQL, PostgreSQL, MongoDB, Cosmos
Dev Tools: Git, AWS, Google Cloud, ElasticSearch, Fastai, Tensorflow, Docker, Terraform, Kubernetes, Prometheus, Firestore, Firebase, Postman, Jenkins, Jira, Sentry, FFMPEG, ROS

Professional Experience

Sharper Shape — San Jose, CA

Software Engineer (intern) — Jun. 2022 - Present

- Contributed to the software development life cycle of a T&D inspection solution by efficiently integrating cutting-edge technologies.
- Employed AWS CDK in Python for integrating S3, SNS, SQS, and DLQ, and Lambda functions to trigger actions based on bucket events, resulting in reduced latency by 10% of manual process and improved system reliability.
- Incorporated Slack SDK, expediting communication by 60% within the company's designated channel upon S3 event completion and Lambda failure, bolstering team coordination and response time.
- Generated Amazon S3 Usage Report, delineating client-based S3 usage, which aided in defining project scope and calculating cost to user, leading to 20% increase in client satisfaction.
- Devised a React interface, facilitating the import of CSV files and uploading them to an S3 bucket and initiating Lambda functions, resulting in 75% faster data processing.
- Constructed CI/CD pipelines, overseeing seamless integration and release of changes for service and underlying resources, which contributed to a 20% decrease in time-to-deploy.
- Collaborated within a pluridisciplinary team including US Software Lead and Product Manager, maintaining a close communication and asking calibrated questions to remove bottlenecks and reach alignment.
- Engaged in continuous learning and professional development, ensuring the incorporation of cutting-edge tools and techniques in the development process.

Expertrons — Mumbai, MH, India

Software Developer — Dec. 2020 - May 2021

- Cooperated with an Agile Scrum team consisting of 6 members, skillfully developing a mobile app utilizing Node.js, React, React Native, Typescript, and MongoDB, thus fostering effective teamwork and expediting the development process.
- Employed video caching and FFMPEG for video compression, achieving a remarkable 12% decrease in load time and a 41% reduction in transmission bandwidth, thereby significantly enhancing user experience and minimizing resource consumption.
- Optimized MongoDB indexing for swifter searching and employed aggregates for intricate queries, further participating in AWS setup and migration, which encompassed constructing microservices and reducing costs by an impressive 10%.
- Championed and executed the installation of an on-premises variant of Sentry, streamlining the tracking of bugs and issues across all platforms, and promoting swift issue resolution and improved software stability.

Geekwork

Mumbai, MH, India

Backend Developer (intern) Dec. 2019 - Mar. 2020

- Enhanced AGV mobility and collision avoidance by adeptly working with ROS, Dijkstra's algorithm, and the A* algorithm for pathfinding, resulting in 20% increased efficiency and 12% reduced error rate in AGV operations.
- Skillfully integrated APIs including OneDrive, Google Drive, and Slack, promoting seamless communication and data sharing among team members and improving overall productivity.
- Devised an ETL process to proficiently extract data from cloud APIs, utilized Apache Tika for data processing, and securely stored the results in ElasticSearch, leading to 45% faster data retrieval.
- Shadowed Senior Engineers, seeking opportunities to contribute while observing their work to learn best practices.

Projects Experience

Drowsiness Detection Using InceptionV3 and Dlib

Nov. 2021 - Nov. 2021

- Devised an innovative drowsiness detection system employing InceptionV3 and Dlib, which achieved an impressive 96% accuracy rate in identifying drowsiness, significantly enhancing road safety.
- Utilized deep learning models and computer vision techniques facilitated the analysis of facial features and eye movements, utilizing Python, Tensorflow, Keras, OpenCV, and Image processing.

Sign Language Detection

Nov. 2021 - Nov. 2021

- Engineered a groundbreaking solution to facilitate communication with individuals who are Deaf and Dumb by adeptly translating hand sign language into text and speech, profoundly impacting inclusivity.
- Skillfully applied Mediapipe for posing and calibrated the baseline Long-Short Term Memory for models, achieving an 89% accuracy rate, utilizing ML, LSTM, OpenCV, Mediapipe, Flask, and Firestore.

Swachh - AI-enabled citizen grievance reporting system

Sep. 2020 - Sep. 2020

- Innovated an application empowering users to report grievances by capturing images, which then leveraged PyTorch and CNN for image classification, attaining a 91% accuracy rate.
- Enable the system to system subsequently inform nearby authorities based on the user's location, fostering prompt resolution.

India-location-details - Open-source

Jul. 2020 - Jul. 2020

- Formulated an NPM package (India-location-details-), enabling users to obtain comprehensive information about Indian regions by zip code, cities, and states, thus streamlining geographical data access, utilizing JS and Node.js.

Automated Guided Vehicle

Mar. 2020 - Mar. 2020

- Conceived an Automated Guided Vehicle using ROS and Python for efficient logistic operations, revolutionizing material handling processes.
- Generated a 2D cost map utilizing lidar sensor data and developed proficiency in ROS fundamentals, encompassing Lidar usage, the publisher-subscriber model for device communication, and sockets.
- Analyzed Lidar data to produce and plot area maps, and utilized Gazebo for visualizing AGV movements.