


# Akshat Gupta

 LinkedIn  Github  Medium

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## EDUCATION

- San Jose State University (SJSU)** San Jose, CA  
• *Master of Science - Computer Engineering* August 2023 - Present
- Savitribai Phule Pune University** Pune, India  
• *Bachelor of Engineering - Computer Engineering* August 2018 - May 2022

## SKILLS SUMMARY

- Programming Languages:** Python, JavaScript, C, C#, TypeScript, Bash, SQL.
- Development:** ExpressJS, NodeJS, React, Redux, Flask (Python), ASP.NET Core Web API, Tailwind CSS, Webpack, Material-UI, Radix-UI, REST API, Vite, Preact, YAML, Figma, SaaS.
- Databases & Cloud:** MongoDB, PostgreSQL, MySQL, Kafka, FireBase, Docker, Kubernetes, AWS (Lambda, Sagemaker, S3 Bucket, EC2), GCP (Cloud Storage, Buckets, Firestore etc.), Azure.
- Tools & Frameworks:** Mongoose, PyMongo, MongoEngine, Postman, Git, GitLab, PySpark, Jira, TensorFlow, Keras, PyTorch.

## EXPERIENCE

- Copal.ai (Link)** San Jose, CA  
• *Software Engineering Intern* June 2024 - Present
  - Technologies: TypeScript, ReactJS, Node, MySQL, Python, GCP Firebase, Vite, Radix, SaaS
  - Architected and refined the **coursepack module of the startup's core SaaS MVP** in TypeScript & React, achieving a **50%** faster server response time, resulting in a **15%** boost in user retention.
  - Developed Firebase query functions for **real-time state management** resolving performance bottlenecks & implemented **workers queue for batch state updates**, enhancing user experience by ensuring seamless data handling.
  - Developed core reusable components such as AI based Chatbox, DragnDrop reordering etc. contributing to 10+ feature Jira tickets.
- SJSU Research Foundation (Link)** San Jose, CA  
• *Research Assistant* Feb 2024 - Present
  - Technologies: Express, ReactJS, Redux, MongoDB, Mongoose, GCP Firestore, Buckets, Cloud Run, Docker
  - Engineered a product for the **AANHI** community, enabling user contribution & engagement with resources in **80+** languages.
  - Designed and **developed core modules of the product** for user interaction with resources through translatioion, semantic search, question-answering, and multilingual resource contributions.
  - Streamlined the deployment using **Docker & Cloud Run**, ensuring robust data management with **Cloud Storage & Firebase**.
- Cognizant** Pune, India  
• *Software Engineer* Feb 2022 - July 2023
  - Technologies: ExpressJS, ReactJS, MySQL, Microsoft Azure, REST APIs, Microservices
  - Developed stock & fulfillment APIs facilitating stock count data access using SQL Server and Express.JS, replacing the existing MVC pattern and resulting in over a **22%** faster processing time.
  - Restructured model classes for personalized alignment with varied customer preferences & buying behaviors, elevating purchase probabilities by **17%**. Formulated **Python** scripts for data migration and syncing across **PostgreSQL** and **MongoDB**.
  - Led the creation of a microservice architecture using **Node.js**, **Express.js**, and **Docker** and introduced **Azure** functions for serverless computing, enhancing system scalability and efficiency.
- Intangles Lab** Pune, India  
• *Project Intern* Oct 2021 - Feb 2022
  - Technologies: Python, Flask, MongoDB, TensorFlow, CNN, Computer Vision, API
  - Devised data-driven insights, enabling transit companies (like RedBus, Volvo etc.) to achieve a substantial **20% reduction in fuel consumption** and capturing **fuel theft amounting to \$3.5 Mn** through real-time monitoring
  - Proposed and developed end-to-end dataset creation pipeline aiding in live image capture of **16000+ images** of drivers across varying environmental conditions
  - Leveraged YOLOv4-tiny & FaceNet model with a custom fully connected network for object detection and face recognition with F1 scores of **0.84 & 0.91** respectively, resulting in driver **identification using only 3 low resolution images**.

## PROJECTS

- Sequoia (Link)** - Designed a MVP platform for a startup for test creation and preparation, supporting over **1,000 users**. Enhanced test loading performance with Firebase, achieving real-time updates within **2 seconds**. Increased user engagement by **25%** with performance dashboard, week-on-week progress and adaptive UI, mirroring Twitter's dynamic content.
- WingView, Team Garudashwa** - Designed a GUI for displaying UAV's inflight altitude, time etc. assisting in automating multiple functionalities wirelessly from ground station & achieving **9th position globally in SAE AeroDesign West 2020.**
- Computer Vision based Product Inspection, IIT Delhi - AIA FSM** - Developed an algorithm to connect warehouse cameras to the server for enabling automated product image classification for fault detection, visualizing the results on a web app dashboard with an accuracy of 89.4