MANAV JAIN

(213) 675-8278 | manavj2504@gmail.com | LinkedIn | GitHub

Education

University of Southern California **Aug 2021-May 2023**
Masters in Computer Science ***CGPA:- 3.85/4***

University of Mumbai **Aug 2017-Jun 2021**
Bachelor of Engineering in Information Technology ***CGPA:- 9.53/10***

Technical Skills

Programming Languages: Python, JavaScript, Java, C++, TypeScript, Go

Web Development: Angular, React, React Native, Node.js, Express.js, Flask, HTML, CSS, REST, GraphQL

Databases, DevOps & AI: PostgreSQL, NoSQL, MySQL, MongoDB, Supabase, Neo4j, AWS, Github, Docker, Kubernetes, CI/CD, Terraform, TensorFlow, Natural Language Processing, Machine Learning

Experience

Bridgehaul Logistics Solutions, LLC | Full Stack Engineer 2 **Oct 2023 – Present**

- Designed and developed **three scalable full-stack applications** (Carrier TMS, Shipper TMS, Admin Tools) in a **fast-paced startup** environment using **Angular** (frontend), **Node.js** (backend), and **PostgreSQL**.
- Engineered BridgeHaul's flagship **mobile app from scratch** using **React Native** and **Redux**; incorporated **cross-platform optimization** and **role-based access control**; launched on **iOS** and **Android**.
- Developed the **BridgeHaul Intelligence System** by integrating **GPT-4o**, automating internal query handling and dynamic response validation.
- Automated **W9 parsing** with **GPT-4o**, cutting manual entry by **90%** and accelerating enterprise onboarding.
- Engineered real-time **webhook integrations** with Motive, Samsara,QuickBooks improving operational efficiency.
- Led architecture and development of critical features: **asset tracking**, **fuel stop suggestions** (route-optimized), **load marketplace**, and **factoring solutions**.
- Built a secure graph-based **Neo4j** permission system to support granular role-based access across platform modules.
- Accomplished up to **60% performance gains** across dashboards, invoicing, and tracking modules using techniques such as promise chaining, lazy loading, database indexing, partitioning, horizontal scaling, and query optimization.

Cansera | Software Engineer (Part-Time, OPT Program) **July 2023 – Oct 2023**

- Participated in a flexible, part-time software engineering role under the OPT program, contributing to the **design and development** of a **scalable full-stack application**.
- Built **UI components** and **workflows** using **React**, **Node.js**, and **PostgreSQL**, aligned with business goals.
- Created **wireframes** and collaborated with **cross-functional teams** to improve **usability** and **functionality**.

Rivian | Software Engineer Intern **May 2022 –Aug 2022**

- Integrated automated static code and security analysis tools across multiple **microservices**, enhancing early vulnerability detection and improving **code quality**.
- Provisioned and deployed **scalable infrastructure** with **Terraform** to stream **AWS CloudWatch metrics** across dev, staging, and production environments, enabling **real-time observability** and **performance monitoring**.
- Constructed a **scalable data ingestion pipeline** in **Databricks** using **PySpark autoloader jobs** to perform **ETL tasks**, write delta tables to Silver S3 buckets, and generate **SQL-based datasets** for downstream analytics.

Projects & Research Paper

Fan Meeting App | *Go, React Native, AWS, Docker, PostgreSQL* **June 2025 — Present**

- Building a **cross-platform app** where YouTubers sign in, link channels via the **YouTube Data API**, and host live fan meet events with Agora-powered video calls and enabling seamless Google Sign-In for fans.
- Developing a secure **Go backend** with **PostgreSQL database**, deploying with **Docker & AWS**.

Stock Market Web App | *Flask, ReactJS, Python* [Demo] **Oct 2022– Dec 2022**

- Developed a **responsive web app** allowing users to buy/sell stocks and manage portfolios.
- Integrated real-time data using **Finhub API**; visualized data with interactive **HighchartJS** charts.

Deep Fake | *Deep Learning, TensorFlow* [Demo] **Apr 2021-May 2021**

- Achieved face swapping capabilities in **live streaming** by modifying **1st Order motion model** algorithm and applying **unsupervised segmentation masks** consisting of **5 segmented parts (5 Segment Model)**.
- Transformed model by creating **10 segmented parts** and trained it on **VoxCeleb dataset**.
- Synthesized **face parsing model** and used **motion-supervised co-part segmentation** for part swapping.
- **Enhanced algorithm by 15%** using **relative keypoint locations** instead of absolute keypoint locations.

Mental Health State Detection | *OpenCV, Machine Learning, NLP, CNN* [Paper Link] **Jan 2020–Jul 2020**

- Implemented a system to **assess mental health** by analyzing **heart rate** (via pulse recognition), **facial emotions**, and **stress levels** using a **sentiment analysis chatbot** and **questionnaire** designed by a mental health expert.
- Attained 90% accuracy using **HOG + CNN** for **facial emotion recognition**; applied **OpenCV** to isolate the forehead for **pulse-based detection**.
- Trained chatbot with **Sentiment140 dataset** containing **1.6 million tweets**, annotated (0=negative, 4=positive).
- Presented & published peer-reviewed research at the **IEEE ICISS Conference.**