

LOUKIK NAIK

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Education

- **University of California, San Diego** California, USA
Master of Science (MS) in Computer Science (GPA: 3.97/4.0)
 - **Courses:** Algorithm Design & Analysis, Recommender Systems and Data Mining, Graduate Network Systems, Unsupervised Learning, Natural Language Processing
- **University of Mumbai** Mumbai, India
Bachelor of Engineering in Computer Engineering (GPA: 9.71/10.0)
May 2023

Technical Skills

- **Areas:** Data Structures, Object Oriented Programming (OOP), Distributed Systems, Cloud Computing, System Design, Software Development Lifecycle (SDLC), Design Patterns, Information Retrieval, Natural Language Processing (NLP), Large Language Models (LLMs).
- **Programming Languages:** Java, Python, C, C++(STL), JavaScript, HTML, CSS, SQL, Bash
- **Tools and Frameworks:** Git, Pytorch, Tensorflow, Keras, ScikitLearn, FastAPI, Numpy, Flask, Pandas, Scikit-Learn
- **Infrastructure:** CI/CD Pipelines, Kuberenets, Docker, Kubeflow, Grafana, Prometheus

Work Experience

- **Machine Learning Engineer** San Francisco, USA
Plainsight Technologies January 2025 - Present
 - Developed scalable **FastAPI** endpoints from scratch to serve Meta Segment Anything Model (**SAM**) and MobileSAM models for real-time, prompt-based image segmentation.
 - Automated the **ML training pipeline**, triggering model training upon new data labeling events in **Encord**, significantly reducing manual intervention.
 - Contributing to the design and development of a tool to streamline training and deployment of **PyTorch-based computer vision models** (segmentation, object detection, keypoint detection), reducing time from data ingestion to production.
 - Maintain and evolve containerized ML model serving infrastructure using **Docker** and **Docker Compose**, ensuring reproducibility, scalability, and ease of deployment in production environments.
 - Designed and implemented a robust **integration testing framework** to validate end-to-end performance of the custom CV model generation pipeline.
- **Machine Learning Intern** San Diego, USA
Plainsight Technologies June 2024 - December 2024
 - Developed serverless functions with **Google Cloud Functions** for real-time video processing.
 - Built a **Kubeflow** pipeline for preprocessing video files triggered by **GCS** bucket events.
 - Orchestrated ML workflows using **Google Cloud Platform** and **Kubernetes**.
 - Designed an environment calibration model to extract video stream statistics.
 - Streamlined testing and deployment via **GitHub Actions**, **PyPi**, and **Docker**.
- **AI Developer Intern** Mumbai, India
Lab Systems February 2023 - April 2023
 - Developed a video forensics tool to analyze CCTV footage for law enforcement.
 - Researched and implemented object and text recognition algorithms to enhance performance.
 - Leveraged Python libraries (**Pytesseract**, **EasyOCR**, **YOLO**, **Mediapipe**) for detection tasks.

Projects

- **Surfstore: A Distributed File Storage System** | *Software Development, Computer Networks*
 - Built a **Horizontally Scalable** file storage system in **Go**, storing data across multiple block and metadata servers.
 - Implemented the **Raft consensus** algorithm to synchronize changes across metadata servers.
- **PPG Signal Based Hypertension Prediction** | *Data Engineering, Machine Learning* Paper
 - Developed a robust ETL pipeline for the MIMIC-III dataset ensuring high data quality and integrity.
 - Achieved a test **accuracy of 74%** and a **sensitivity of 91%** on the dataset.