

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) December 2024
 - **Courses:** Algorithm Design & Analysis, Recommender Systems & 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

Work Experience

- **Machine Learning Engineer** San Francisco, USA
Plainsight Technologies January 2025 - August 2025
 - Built and deployed **REST APIs** using **FastAPI** to serve computer vision models like **Meta's Segment Anything Model (SAM)** and **MobileSAM**, enabling real-time image segmentation inference for internal services.
 - Dockerized API servers and enabled deployments across environments using **Terraform** scripts in CI/CD.
 - 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.
 - Engineered an **automated retraining workflow** triggered by Encord's labeling events, ensuring models are updated dynamically with newly labeled data.
 - Built an automated end-to-end **benchmarking** workflow to evaluate retrained models against production thresholds, streamlining publishing and reducing manual review.
- **Machine Learning Intern** San Diego, USA
Plainsight Technologies June 2024 - December 2024
 - Developed serverless Google Cloud Functions to **dynamically trigger Kubeflow pipelines** for preprocessing and running inference on video files uploaded to Google Cloud Storage, enabling real-time, **automated video inference workflows**.
 - Deployed these pipelines on **Google Kubernetes Engine (GKE)**, enabling scalable and resilient ML processing.
 - Developed a pipeline component to extract useful metadata from video streams (e.g., duration, resolution, frame counts), which feeds into downstream analytics and decision logic.
 - Streamlined **CI/CD** and release workflows using **GitHub Actions**, and **Docker**
- **AI Developer Intern** Mumbai, India
Lab Systems February 2023 - April 2023
 - Built a video forensics tool to assist law enforcement agencies in analyzing CCTV footage.
 - Implemented object and text recognition algorithms within the tool to enhance detection accuracy upto 90%
 - Leveraged libraries such as Pytesseract, EasyOCR, YOLO, and MediaPipe for efficient video analytics.

Projects

- **Prompt Based Email Classifier** | *Software Development, LLMs, Prompt Engineering* [Github](#)
 - Developed an **LLM inference pipeline** for email classification, enabling custom prompt-driven categorization, importance detection, and real-time prioritization.
 - Integrated **Ollama** and **Google's Gemini API** via **LangChain**, delivering **efficient and privacy-preserving** LLM-powered email processing with **multithreaded optimization** and seamless **Gmail API** connectivity.
- **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.

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:** Python, C++(STL), JavaScript, HTML, CSS, SQL, Bash
- **Tools and Frameworks:** Git, Pytorch, Tensorflow, Keras, FastAPI, Numpy, Pandas, Scikit-Learn
- **Infrastructure:** CI/CD Pipelines, Kubernetes, Docker, Kubeflow, Grafana, Prometheus