LOUKIK NAIK

✉ loukiknaik@gmail.com | 🔗 linkedin/loukiknaik | 🌐 portfolio.loukik.dev | **San Francisco, CA**

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 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's 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.
- Created automated **Kubeflow** pipelines to preprocess video files triggered by **Google Cloud Storage** events.
- Orchestrated ML workflows with **GKE (Google Kubernetes Engine)** and **Kubernetes**
- Designed a calibration model to extract statistical features from video streams.
- Streamlined continuous integration, testing, and deployment with **GitHub Actions**, **PyPi**, and **Docker**.

AI Developer Intern — Mumbai, India
Lab Systems — *February 2023 - April 2023*
- Built a video forensics tool to assist law enforcement in analyzing CCTV footage.
- Implemented advanced object and text recognition algorithms to enhance detection accuracy.
- Leveraged libraries such as **Pytesseract, EasyOCR, YOLO,** and **MediaPipe** for efficient video analytics.

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.