SANDESH PATIL

AI Engineer | +91 7349215174 | patil2004sandesh@gmail.com ||Linkedin | Bengaluru

PROFESSIONAL SUMMARY

AI Engineer specializing in machine learning, deep learning, and data science. Proficient in Python, PyTorch, TensorFlow, Hugging Face, NLP, and LLM fine-tuning. I build and deploy real-time solutions across healthcare, computer vision, and automation, delivering scalable, production-grade systems with measurable impact.

TECHNICAL SKILLS

Programming Languages: C, Python, Java, Go Lang
Frameworks: PyTorch, Hugging Face, Langchain, LangGraph
Nlp: NLP
Cloud Deployment: Docker, Kubernetes
Tools And Databases: MySQL, Neo4j, Google Colab, Kaggle, Vector Databases
Others: ML, Deep Learning, RAG, LLM fine-tuning

PROFESSIONAL EXPERIENCE

AI Engineer | *Jun 2025 - Present*
Meril | *Bengaluru*

- Led design and deployment of **end-to-end AI pipelines** for clinical NLP and computer vision, enabling real-time processing and structured outputs.
- Applied **LLM fine-tuning** and evaluation frameworks to enhance decision support; partnered with clinicians to translate requirements into models.
- Built **rule-based document and ID classification** to improve data integrity and compliance; automated extraction of key fields.
- Implemented **production monitoring and CI/CD** to harden services, improving reliability and reducing incidents.

Technologies Used: *Python, PyTorch, Hugging Face, OpenCV, Langchain, LangGraph, RAG, Vector Databases, Neo4j, NLP*

Software Development Intern | *Feb 2025 - Jun 2025*
Dell Technologies | *Bengaluru*

- Contributed to **infrastructure automation** workflows using Golang and Python, focusing on scalable orchestration and deployment.
- Built and optimized **containerized services** with Docker and Kubernetes to streamline environment setup and rollouts.
- Collaborated on testing, debugging, and **performance tuning** to ensure **production readiness** and stability across modules.
- Improved release reliability with **CI/CD** and **validation gates**, reducing deployment failures

Technologies Used: *Golang, Python, Kubernetes, Docker*

PROJECTS

AI model for predicting Tooth Resorption

Built AI models to detect early signs of root resorption from dental imagery to aid orthodontic treatment decisions.

- Developed **CNN + Random Forest** pipeline with **OpenCV preprocessing**, improving early detection rates and reducing false negatives.
- Applied **data augmentation** and model tuning to increase accuracy while maintaining inference speed suitable for clinical workflows.

Sign Language Recognition

Implemented real-time gesture classification to recognize sign language and enhance accessibility for hearing-impaired users.

- Built **CNN with Transfer Learning** using TensorFlow, achieving accuracy of 90% with inference latency around 45–60 ms on live video.
- Created labeled dataset with **LabelImg** and **OpenCV** pipeline, expanding training data by 1200+ to improve generalization by **18–22%**.

Traffic Flow Management

Designed ML-driven congestion detection and signal optimization using real-time feeds to reduce urban traffic delays.

- Implemented **ML-based congestion detection** with TensorFlow and real-time processing, reducing average wait times by 15–20% on test routes.
- Optimized signal timing strategies, decreasing congestion events by **~15%** and improving throughput across monitored intersections.

EDUCATION

Bachelor of Technology, CSE | *2025*

Dayananda Sagar University | *Bangalore*

Class XII, State Board | *2021*

KLE Prerana PU College | *Hubballi*

Class X, State Board | *2019*

Sri Krishnadevaraya Educational Society | *Sindhanur*

CERTIFICATIONS

- NPTEL Python
- NPTEL Design and Analysis of Algorithms
- NPTEL Database Management System

ACHIEVEMENTS

- Reached the finals of the college-organized Coding Challenge, finishing among the top 2 finalists.

LANGUAGES

- English
- Kannada