

# Romit Addagatla

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## Education

**SIES Graduate School of Technology**, B.Tech in Artificial Intelligence And Machine Learning

2021 – 2025

## Experience

**Python AI Intern at Arcitech.ai, Navi Mumbai**

Dec 2025 – Present

- Integrating AI features and building multi-agent systems for production projects.
- Developing intelligent workflows using **LangChain**, **LangGraph**, and **LangSmith** for monitoring and orchestration.
- Building scalable backend services with **FastAPI** and **PostgreSQL**.
- Implementing vector search capabilities using **pgvector** for enhanced AI-powered retrieval.

**AI/ML Intern at Annam.ai, IIT Ropar**– Center of Excellence in Digital Agriculture

Aug 2025 – Oct 2025

- Engaged in AI/ML research focused on computer vision and applied deep learning for digital agriculture.
- Leveraging **PyTorch**, **Transformers**, and **Vision Transformers (ViT)** for high-performance image modeling.
- Implementing scalable deployment using **FastAPI**, **Docker**, and cloud-based workflows.
- Applying **MLOps** principles with **MLflow** for experiment tracking, model versioning, and lifecycle management.
- Exploring **Generative AI** and **LLMs** to enhance interpretability and intelligent automation within AI systems.

## Projects

**News Article Translation and Text to Speech in Indic Languages**

[News-translation-and-TTS](#)

- Automates extraction, translation, and TTS of web news articles in Indic languages using **newspaper3k**, **IndicTrans2**, and Facebook's **TTSMMSS**
- Deployed with Docker and FastAPI for scalable integration
- **Keywords:** NLP, Speech Synthesis, Deployment

**RAG for Hotels**

[RAG Model for Hotels](#)

- Implements RAG model for hotel booking insights using FAISS for vector search and Mistral-7B via Hugging Face API
- Integrated LangChain for orchestrating workflows with comprehensive data cleaning and EDA
- Deployed with FastAPI and Docker for production readiness
- **Keywords:** NLP, IR, Machine Learning, Scalable Deployment

**GuardNet: Violence Detection in Public Surveillance**

[GuardNet](#)

- Built hybrid deep learning model (ConvNeXt-Tiny + LSTM + attention) for CCTV violence detection with temporal modeling
- Published research paper at [IEEE as GuardNet](#)
- **Tools Used:** PyTorch, ConvNeXt, LSTM, OpenCV, CUDA

**Financial Fraud Detection System**

[Fraud Detection Model](#)

- Built ML model for fraud detection on 6.3M financial transactions with 0.13% fraud cases
- Implemented feature engineering with Random Forest and XGBoost classifiers using SMOTE for class imbalance
- **Keywords:** Fraud Detection, Imbalanced Data, Machine Learning

## Technologies

**Languages:** Python, C++, JavaScript, SQL, Bash, C, HTML

**Tools & Platforms:** Docker, AWS, MySQL, Github, Git, LangChain, LangGraph, LangSmith , FastAPI , Django

**Data Visualization:** Matplotlib, Seaborn, Plotly, Tableau

**Databases:** Postgres, SQL, MySQL

**ML Frameworks & Models:** TensorFlow, PyTorch, Keras, Scikit-learn, NLTK, SpaCy, Numpy, Pandas | Linear/Logistic Regression, SVM, K-NN, Decision Trees, Random Forest, Clustering

**AI & NLP:** Transformers |GPT-4, Llama-3, Claude 3| Generative AI, NER, Chatbots, Document QA, Semantic Search