

# RAJESWARI DAMAM

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## EXPERIENCE

### Data Science and Generative AI Intern

#### Innomatics Research Labs

January 2025 – March 2025

- Designed and optimized retrieval-augmented generation (RAG) pipelines for enhanced AI-driven responses.
- Implemented Generative AI solutions using LangChain for text-based applications.
- Conducted data preprocessing, feature engineering, and exploratory data analysis (EDA)
- Deployed ML models with Streamlit, integrating API-based real-time AI responses for interactive applications.
- Experience with Generative AI, NLP, Streamlit, LangChain

## ACHIEVEMENTS

- Finalist - Intelligent Innovators Hackathon 2022, Sri Eshwar College of Engineering
- Achieved 4th Place in the All India Campus Ambassador Program by E-Cell, IIT Bombay, for excellence in leadership and entrepreneurship

## SKILLS

### Programming Languages

- Python, Java, JavaScript, SQL, HTML/CSS

### Technologies

- Generative AI, Data Analysis, Machine Learning, Deep Learning, LangChain, MongoDB, React, node.js

### Tools

- Git/GitHub, Streamlit, Power BI

## EDUCATION

### Bachelor of Technology (B.Tech), Artificial Intelligence and Machine Learning

#### Malla Reddy University

2021 – 2025

Hyderabad, Telangana

CGPA: 9.0/ 10.0

### Board of Intermediate Education (12th Grade)

#### Narayana Junior College

2019 – 2021

Kurnool, Andhra Pradesh

Score: 959/1000

### Secondary School Certificate (SSC- 10th Grade)

#### Jyothi High School

2018 – 2019

Gudur, Andhra Pradesh

CGPA: 9.7/10.0

## CERTIFICATIONS

- Advanced Data Analysis Certification
- Certificate of Excellence - Campus Ambassadors (E-Cell,IIT Bombay)
- NPTEL Online Certifications (AI, IoT)

## PROJECTS

### Enhancing Search Engine Relevance for Video Subtitles

- Built a semantic search engine using TF-IDF and BERT embeddings.
- Optimized retrieval with cosine similarity and ChromaDB. Integrated Whisper for audio query transcription.
- Tools Used: Python, SentenceTransformers, TF-IDF, ChromaDB, Whisper.

### AI Chatbot with LangChain and Gemini

- Developed an AI chatbot using LangChain and Streamlit, integrating Google Gemini for intelligent responses.
- Implemented user authentication and RAG-based retrieval for context-aware interactions.
- Tools Used: Python, LangChain, Streamlit, Google Gemini, SQLite

### Laptop Price Prediction Using Machine Learning

- Developed a machine learning model for predicting laptop prices based on technical specifications, leveraging data pre-processing, feature engineering, and regression analysis techniques.
- Tools Used: Python, streamlit, scikit-learn, Pandas, NumPy, Seaborn

### DeepFake Detection Using Deep Learning

- Designed a deep learning model using ResNext and LSTM for deepfake detection, implementing a robust pipeline for video frame processing, feature engineering, and model training using TensorFlow and Keras.
- Tools Used: Python, TensorFlow, Keras, ResNext, LSTM

### Smart Home Automation Using IoT

- Built an ESP32-based IoT system with temperature-controlled fan speed, smart door operations, and real-time gas and smoke detection for enhanced automation and safety.
- Tools Used: ESP32, DHT11, Servo Motor, Bluetooth, Arduino IDE.

## INTERESTS

- Reading, Music, Photography and Cooking