

# Goutham Krishna K S

Thrissur | goutham24krishna@gmail.com |

<https://github.com/silverdawn-gtm> | [linkedin.com/in/goutham-krishna-](https://www.linkedin.com/in/goutham-krishna-)

## Objective

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Motivated AI and Machine Learning graduate skilled in Python, TensorFlow, OpenCV, and FastAPI, with three full-stack projects shipped — including a multilingual RAG assistant covering 4,600+ government schemes in 22 languages. Eager to apply these skills to innovative projects and develop further in a dynamic, technology-driven environment.

## Projects

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### Indian Sign Language (ISL) Interpreter

MobileViT + LSTM | TensorFlow | MediaPipe | Flutter | Flask

- Built a real-time ISL interpreter using MobileViT for static gestures and an LSTM sequence model for dynamic gestures, deployed on a backend server.
- Processed video datasets using MediaPipe hand landmarks, applied augmentation, and trained models achieving high-accuracy gesture recognition despite a small dataset.
- Developed a Flutter Android app that streams camera frames to the server and displays translated text in real-time.
- Implemented Flask based REST APIs to handle inference and return gesture-to-text translation.
- Added Text-to-Speech (TTS) for gesture-to-voice communication support.

### InsightAI – AI-Powered Analytics Platform

FastAPI | PostgreSQL | LangChain | Mistral LLM | Pandas | Docker | React

- Built a full-stack analytics platform that processes CSV files to generate KPIs, charts, correlations, and AI summaries.
- Integrated LangChain + Mistral to auto-create vectorstores and enable retrieval-based Q and A on user data.
- Implemented secure JWT auth, per-user file storage, admin APIs, and 7-day auto-cleanup.
- Developed a React + Tailwind dashboard with real-time insights from the backend.
- Containerized and deployed the system on Railway with PostgreSQL for scalable cloud hosting.

### Government Scheme Chatbot

RAG | FastAPI | Mistral LLM | IndicTrans2 | Docker | React

- Designed an AI chatbot to provide accurate information on government schemes using RAG .
- Enabled multilingual queries with IndicTrans2 and context-aware responses using Mistral LLM.
- Built a FastAPI backend and Dockerized the system for scalable deployment.

## Internships

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### IoT And Robotics, Stem Robotics – Kochin, Kerala

June 2025 – June 2025

- Built an autonomous robot using Arduino and ultrasonic sensors with C++ for real-time obstacle detection and navigation.
- Applied principles of IoT, microcontroller programming, and robotics control logic.

### Artificial Intelligence And Python, Pacelab – Kochin, Kerala

June 2024 – July 2024

- Developed an AI-powered chatbot using Python
- Designed conversation flow and integrated machine learning techniques to enhance response accuracy

### Virtual Internship In Cyber Security, Cisco Networking Academy - Online

May 2024 – July 2024

- Successfully completed modules on Introduction to Cybersecurity, Cybersecurity Essentials, and Introduction to Packet Tracer.

## Education

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| <b>B.Tech in Artificial Intelligence and Machine Learning</b><br>Vidya Academy Of Science And Technology,Thrissur | 2022 – 2026 |
| <b>Higher Secondary Education</b><br>Government Higher Secondary School, Nandikara, Thrissur                      | 2020 – 2022 |
| <b>Higher Secondary Education</b><br>Sree Krishna High School, Mattathur, Thrissur                                | 2019 – 2020 |

## Skills

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- **Programming Languages** : Python, C, R Programming
- **Framework** : Tensorflow, FastAPI, Flask
- **Tools** : VS code, Docker, Git
- **Soft Skills** : Quick Learner, Problem Solving, Team Collaboration, Communication, Time Management

## Certification And Courses

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- **Linux, Python 3.4.3, LaTeX** - Spoken Tutorial (IIT Bombay)
- **Advanced Robotics Application** - NPTEL (IIT Kanpur)
- **Iot and Robotics** - Corizo

## References

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Available upon request