Athul Jestin

AI/ML Engineer

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EXPERIENCE

Software Engineer – Trainee 11/2025 – Present
ThoughtMinds Ernakulam, India

- Led the end-to-end development and deployment of an **LLM-powered Smart Troubleshooting App**, increasing field troubleshooting efficiency by **70%**, replacing legacy Excel-based "why-why" analysis with a dynamic conversational assistant.
- Designed and implemented **RESTful APIs** using **FastAPI** and **PostgreSQL**, improving data retrieval speed and reliability by **50%** across troubleshooting workflows, chat logs, document indexing, and product mapping.
- Integrated **Azure OpenAI's GPT models** with **Assistants API** and **thread-level memory management**, reducing prompt overhead and latency by **35%** while ensuring accurate, context-aware responses.
- Utilized **Pinecone vector database** and **Azure Blob Storage** to enable secure document-based question-answering at scale, enhancing retrieval relevance and user satisfaction by **60%**.
- Implemented **enterprise-grade security** via **Microsoft SSO / Azure AD B2C**, enabling role-based access control (RBAC) and streamlining user onboarding across teams.
- Collaborated within Agile teams using **Zoho**, **Git**, and **CI/CD pipelines** to ensure timely feature delivery, with consistent positive feedback from team leads.

Key Technologies: FastAPI, Python, PostgreSQL, Azure OpenAI, Pinecone, Azure Blob Storage, Azure Durable Functions, REST APIs, Git, Microsoft Azure, Azure AD B2C

PROJECTS

Car parking space detection:

Image processing, Python

This project demonstrates a simple car parking space detection system using OpenCV and cvzone.
GitHub

- Models used: Image processing
- Language: Python
- ML libraries: Opencv, cvzone, numpy, pickle

Salary Predictor:

ML, Python

Machine learning web application in Python with Streamlit using linear regression that predicts salary.
GitHub

- Models used: Linear regression, DecisionTreeRegressor, RandomForestRegressor
- Language: Python
- Running application: Streamlit
- ML libraries: Scikit-Learn, pandas, matplotlib, numpy, pickle

Word-up-master (College project):

NLP, Python

A Flash Card App for Learning Languages Using Machine Translation
GitHub

- Models used: Text-to-speech(TTS), Google Cloud's Text-to-Speech API
- Language: Python
- Running application: Tkinter for GUI
- ML libraries: Google Cloud Text-to-Speech, Pandas, Tkinter, Customtkinter, Json

VOLUNTEERING

Computer Engineering Student Association (CESA) 2024
Chairman JEC Thrissur
Hackathena '24, 2-day National-level Hackathon 2024
General Convener JEC Thrissur
Computer Engineering Student Association (CESA) 2023
Executive member JEC Thrissur
Hackathena '23, 2-day National-level Hackathon 2023
Co-lead of Volunteering team JEC Thrissur
Tinkerhub Foundation 2021
Outreach lead Eranamkulam, Kerala
Oak Street Event Company 2019
Founder & CEO Thrissur, Kerala

EDUCATION

Data Science & Machine Learning Course *July 2024 - October 2024*
Excelr Solutions, BTM Layout, Bangalore

BTech in Computer Science & Engineering *June 2020 - June 2024*
Jyothi Engineering College, Cheruthuruthi, Thrissur

TECHNICAL SKILLS

- Languages: Python, C, C++, Java, HTML/CSS
- ML libraries: Scikit-Learn, OpenCV, Cvzone, Numpy, Plotly, Pandas, Tensorflow, PyTourch, Pickle, Google Cloud Text-to-Speech, Tkinter.
- Framework: FastAPI, React, Node.js, Express.js
- Database: PostgresDB, MongoDB
- Others: Swagger, Zoho, Git

CERTIFICATES

- Introduction to MongoDB
- Programming for everyone (Python)
- HackS'Us Hackathon
- ARAMBH-2K22 Hackathon
- CESA - 2022-23
- HackAthena'23 Hackathon
- CESA - 2023-24
- HackAthena'24 Hackathon

DECLERATION

I do hereby declare that the above-mentioned information is correct up to my knowledge, and I bear the responsibility for the correctness of the abovementioned particulars.

ATHUL JESTIN