

DARTHI Y J

AI SOFTWARE ENGINEER | PYTHON BACKEND DEVELOPER

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PROFESSIONAL SUMMARY

AI Engineer and Python Backend Developer with hands-on experience building production-ready AI platforms, REST APIs, and automation systems. Skilled in FastAPI-based backend development, LLM integration, prompt engineering, structured JSON inference, and LoRA fine-tuning using Hugging Face and PyTorch. Strong background in AI-driven ETL and real-time automation systems, with proven ability to design reliable, scalable services using Docker, configuration-driven architectures, and robust validation and error-handling strategies.

TECHNICAL SKILLS

Programming Languages : Python (Advanced), Java (Advanced), C (Advanced)

Backend and API Development : FastAPI, Flask, REST API , Pydantic ,API Load test

AI / LLM Engineering : Large Language Models (LLMs), Hugging Face, PyTorch, LoRA

NLP and Data Processing : Text parsing, regex extraction, data validation

Data Engineering : ETL pipelines, schema-aware processing, SCD Type 1 and Type 2, incremental loads

Databases: MySQL, PostgreSQL, SQLite, Redshift, MariaDB

Cloud and DevOps : Docker, Google Cloud Run, GitHub Actions, Render

APIs and Integrations : OpenAI API, AWS Bedrock (Claude), Groq API, Google Gemini API

Web: HTML, CSS, JavaScript, React.js, JSP, Servlet, Bootstrap

Tools: VS Code, Eclipse EE, GitHub / Git, Cursor, Postman , Jmeter

WORK EXPERIENCE

AI SOFTWARE ENGINEER

AINXG fitness private limited ,Coimbatore | Nov 2025 – Present

AI-BASED CALORIE AND WORKOUT RECOMMENDATION SYSTEM

- Developed AI-driven fitness features including meal plan generation, food identification (vision LLMs), and workout recommendations.
- Implemented LLM-based meal planning pipelines with structured JSON outputs, calorie validation, and fallback logic.
- Built food recognition workflows using vision-enabled LLMs, benchmarking models for accuracy and reliability.
- Contributed to ML-based workout recommendation systems using Hugging Face models.

Tech Stack : Python, FastAPI, Hugging Face Transformers, PyTorch, Vision LLMs, LoRA, PEFT, Docker

AI PYTHON DEVELOPER - Cygnussoftwares , Vadavalli

CANDOR DATA PLATFORM | Jul 2025 – Oct 2025

- Worked on an AI-powered data engineering platform converting natural language prompts into Python ETL scripts and SQL pipelines.
- Integrated LLMs via AWS Bedrock to extract structured JSON and drive template-based ETL generation.
- Implemented schema-aware ETL pipelines with transformations, incremental loads, and SCD Type 1 and Type 2 logic.
- Contributed to ETL debugging tools, AI chat features, and payment workflow integration.

Tech Stack : Python, TypeScript, FastAPI, React, PostgreSQL, SQLite, Redshift, OpenAI API, ETL Pipelines, SCD Type 1 and Type 2, Schema-aware AI scripting

SALES INQUIRY AUTOMATION SYSTEM | May 2025 – Jun 2025

- Built an AI-driven email inquiry automation system for classification and response generation.
- Developed backend APIs using FastAPI and integrated frontend components using React.
- Automated email ingestion, classification, escalation, and response workflows.

Tech Stack : Python, FastAPI, React.js, SQLite, AI/ML Models, Task Scheduling, Batched Processing

EDUCATION

B.E. – Computer Science and Engineering | 2021 – 2025

RVS College of Engineering and Technology, Coimbatore

CGPA: 8.1

PROJECTS

- Ultra AI Agent – Modular AI assistant platform with prompt-to-JSON automation (Python, Flask, OpenAI API).
- AI Digital ADA Checker and Fixer – Automated ADA/WCAG accessibility audit and auto-fix system (Python, Selenium, BeautifulSoup).
- Parking Efficiency Management – Real-time parking CRUD system (JSP, Java EE, MySQL).
- Online Art Gallery – Responsive artwork showcase site (HTML, CSS, Bootstrap).
- Remote Exploitation Simulation – Windows 7 vulnerability analysis and exploitation.

CERTIFICATIONS AND INTERNSHIP

- Certified Internship in Cybersecurity.
- Python Development Internship – Data handling and Flask backend development.
- Java In-Plant Training – Core Java, JDBC, and database integration.
- NPTEL Certification – Java Programming.
- NPTEL Certification – C Programming.
- Advanced C Programming.
- Data Structures in C.
- Professional Workshops – Web Development and Data Science.

SOFT SKILLS

Problem Solving | Communication | Leadership | Teamwork | Time Management | Analytical Thinking