

Jaswanth K S

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Personal Profile

Software Engineer with 3+ years of experience building backend services, data pipelines, and cloud-based applications using **Python** and **TypeScript**. Experienced in designing data ingestion systems, **REST APIs**, and data enrichment workflows across structured datasets. Recently worked on small prototype workflows using **LLM APIs** and **retrieval-based** approaches to explore document search, summarisation, and enrichment across structured and document datasets. Completed an MSc in **Data Science and AI** (Merit), with focus on machine learning, information retrieval, and applied AI engineering. Interested in knowledge graphs, GenAI systems, and scalable data infrastructure for financial data and analytics platforms.

Education

MSc in Data Science and Artificial Intelligence, Merit

University of Liverpool | Sept 2023 – July 2025

- **Key Areas:** Machine Learning & Applied AI, Mathematics & Statistics for AI, Database & Information Systems, Data Modelling.
- Worked extensively with Python for Machine learning, data analysis, and Applies AI workflows.

Bachelor of Science, Distinction

Sri Venkateswara University, India | Jun 2018 – Sept 2021

- **Relevant Areas:** Computer Science, Mathematics, Physics.

Experience

Software Engineer – Growz Software Solutions

Bengaluru, India | Nov 2021 – Aug 2023

- Designed and built **data ingestion and enrichment pipelines** integrating structured business and financial datasets into AWS-based data platforms, improving data accessibility and query performance by **30%**.
- Developed **microservices and REST APIs** using **Python and TypeScript**, to integrating external APIs and ML services, and automated data tagging workflows.
- Contributed to **early-stage RAG-style** prototypes using **LangChain** and **LLM APIs**, to support semantic document search and summarisation across internal datasets.
- Worked with data science teams to **evaluate LLM** output for document classification and retrieval quality in internal experiments.
- Built **monitoring dashboards** to track ETL pipeline accuracy, latency, and job failures, improving pipeline reliability and incident detection by **50%**.
- Implemented **CI/CD pipelines using Git and Jenkins** and automated AWS infrastructure provisioning using **Terraform**, reducing deployment cycle time by **40%**.
- Collaborated with product and data teams to improve data modelling and support downstream analytics and ML workflows.

Tech Stack: Python, TypeScript, AWS, SQLAlchemy, Docker, Terraform, LangChain, GitHub, Pandas, NumPy, Scikit-learn, CI/CD, Pytest.

Junior Software Engineer – TechBorn IT Solutions

Bengaluru, India | Sep 2020 – Oct 2021

- Developed **backend services** using **C# and .NET Core**, for analytics dashboards and operational reporting tools.

- Built Python data preprocessing script using **Pandas** and **NumPy** to support predictive modelling workflows.
- Assisted in developing and testing classification models using **TensorFlow** and **Keras** for datasets categorisation tasks.
- Designed **REST APIs** delivering model predictions and enriched datasets to internal client systems.
- Worked in **Agile teams** delivering data-driven software solutions.

Tech Stack: Python, C#, .NET Core, Pandas, NumPy, Scikit-learn, TensorFlow, Keras, SQL Server, AWS (EC2, S3), REST APIs, Git

Key Projects

NYSE Time Series Forecasting

- Built machine learning models using **ARIMA**, **SARIMA**, And **LSTM** TO analyse and forecast stock price movements.
- Processed historical market data using pandas and evaluated predictions against real market data.
- Built interactive interface using Flask and Plotly to visualise predictions and Trends.

Tech Stack: Python, Pandas, Numpy, Statsmodels, TensorFlow/Keras, Flask, Plotly.

Building a National Lottery profit/loss Simulation Platform (Dissertation)

- Built a full-stack simulation platform supporting multi-country lottery modelling and large-scale simulation runs.
- Implemented backend logic for authentication, simulation workflows, and statical visualisation.
- Optimised system to support **80,000+** simulations with stable performance.

Tech Stack: Python, Flask, SQLAlchemy, SQLite, Plotly, Bootstrap, JavaScript

Skills

- **GenAI & Data Systems:** LLM API Integration, RAG concepts, Knowledge graphs and ontology
- **Data Engineering:** ETL Pipeline Development, Data Modelling, Query optimisation
- **Backend Engineering:** Python, TypeScript, C#, JavaScript, FastAPI, Flask, Django, .NET Core, REST API
- **Cloud & DevOps:** AWS (Lambda, Glue, DynamoDB, RDS, S3, EC2), Terraform, Docker, Jenkins, CI/CD, GitHub Actions
- **Databases:** PostgreSQL, SQL Server, MySQL, Data Modeling, Query Optimization
- **Testing:** Pytest, TDD, API Testing, Performance Monitoring

Certifications

- Essentials in Github Professional Certificate - **GitHub**
- Programming with Python Professional Certificate - **OpenEDG Python Institute**
- Docker Foundations Professional Certificate - **Docker**
- Prompt Engineering for Generative AI – **LinkedIn**

Leadership & Activities

- Led a team of 5 to secure a **top 3 finish** in a 24-hour hackathon, showcasing innovation and teamwork.
- Presented a technical paper at **SIGMOID-2K19**, effectively communicating complex concepts to a technical audience.