GOKUL PRASATH RADHAKRISHNAN

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A Data Science graduate with an MSc in Artificial Intelligence and Machine Learning from the University of Birmingham, holding almost 2 years of professional experience in data engineering. Proficient in designing ETL pipelines, Azure cloud tools, and AI/ML techniques, actively seeking opportunities to leverage skills in Data Engineering and AI to make a meaningful impact.

Education

MSc Artificial Intelligence and Machine Learning, University of Birmingham 9/2023 – 9/2024
Modules: Neural Computation, Intelligent Data Analysis, Computer Vision, Evolutionary Computation| **Skills**: **Generative AI, Python, Scikit-learn, PyTorch, PySpark, TensorFlow, Keras, Pyannote, Docker, Matlab, Large Language Model (LLM), LangChain, Groq (LLaMA3)** United Kingdom

MSc, Data Science, Coimbatore Institute of Technology 07/2016-05/2021
Modules: Statistics, Machine Learning, Natural Language Processing, Cloud Computing, Big Data (Hadoop) | **Skills: Python, R, Data processing and Visualisation** India

Courses and Certifications

- **Microsoft Fabric - The Complete Guide - Udemy**
- **Azure Databricks & Data Engineering with Spark – Udemy**
- **BCG GenAI Job Simulation on Forage - June 2024**
- **Microsoft: Azure Administration (AZ – 104), Valid till Jan 2026**
- **Microsoft: Azure Relational Database Administration (DP – 300), Valid till Feb 2026**

Professional Experience

Senior Data Engineer, Addend Analytics, Mumbai, India 08/2021– 05/2023

- Built robust ETL pipelines for data integration across cloud and on-premise systems
- Authored optimized stored procedures and performed data migrations and warehousing projects
- Designed scalable ETL architecture tailored to business and technical requirements
- Managed CI/CD pipelines using Azure DevOps for automated deployments
- Tuned complex SQL queries for performance and scalability
- Administered and maintained Azure databases, including Azure SQL and Cosmos DB
- Implemented Identity and Access Management (IAM) solutions ensuring secure data access
- Developed and executed cloud cost optimization strategies across Azure services
- Developed basic Power BI reports with data transformations using Power Query, connecting to sources like Excel and SQL, and publishing interactive dashboards to Power BI Service.

Skills: Azure Synapse Analytics, Data Modelling, Data Warehousing, T-SQL, FastAPI, SQLite, Azure Cosmos database, Azure DevOps, CI/CD, Terraform, Azure Function App, Python, Azure Data Factory(ADF), Azure Logic Apps, Azure Event Hub, Azure Data Lake, Google BigQuery, ARM templates, Dynamic SQL, Data Security and Governance, Python, Power BI

NLP and Chatbot Intern, bitWise Academy, USA (Remote) 12/2020– 05/2021

- Build a contextual AI tutoring chatbot (RASA) for primary students to support course-related tutoring.

Skills: RASA, Python, NLP, NLU

Data Science Intern, Credo Systemz, Chennai, India 06/2019-11/2019

- Built a customer propensity model to predict course enrolment likelihood.

Skills: Python, Matplotlib, Machine Learning, Predictive modelling

Coursework and Project

1. **Interpretable Machine Learning for Customer Behaviour Prediction | Link**
   Developed a model to evaluate interpretability for algorithms. Designed metrics to balance accuracy and transparency, improving insights into customer behaviour predictions.
2. **Chat with SQL DB – Natural Language SQL Query App using Streamlit & LangChain | Link**
   Developed a dynamic Streamlit-based app to interact with SQL databases via natural language using LangChain's create_sql_agent and Groq's LLaMA3 model. Enabled support for both SQLite and MySQL with real-time query execution, multi-session chat interface, and performance-optimized with caching and agent streaming callbacks.
3. **Object Detection Using Deep Learning Models – Computer Vision**
   Trained and evaluated object detection models (Faster R-CNN, SSD, YOLO) using TensorFlow 2 on custom datasets. Optimized model performance with Google Cloud AI Platform and powerful GPUs for enhanced training efficiency.
4. **MRI Segmentation – Computer Vision**
   Segmented MRI images using traditional techniques like Otsu thresholding, Canny Edge detection, and K-means clustering, achieving 76% accuracy for 2D slices. Extended to 3D segmentation with Mayavi, achieving 70% accuracy.
5. **Optimization Algorithms for TSP – Evolutionary Algorithm | Link**
   Implemented and optimised Simulated Annealing and Genetic Algorithm for the Traveling Salesman Problem. Improved efficiency by 20% through parameter tuning, analysing performance on datasets of up to 100 cities.
6. **Data Analysis using Principal Component Analysis – Intelligent Data Analysis | Link**
   Experimented with preprocessing and dimensionality reduction of numerical datasets using Principal Component Analysis to analyse and draw conclusions about the datasets to facilitate model training.
7. **Data Warehousing in Azure SQL – Data Engineering**
   Designed ETL pipelines for multi-country data integration with robust auditing and failure notifications. Enabled incremental data loading and ensured 99.9% reliability.
8. **VSLA 2.0 – Data Engineering**
   Developed event-driven ETL pipelines with multi-language support using Azure Translator, achieving 99.9% reliability.

Leadership & Awards

1. **Shining Star Award – Q4, 2022,** Addend Analytics, India
   Recognised for consistent performance on complex project (VSLA - CARE) and timely delivery of all tasks with high dedication.
2. **Technical Training Sessions,** Addend Analytics, India
   Delivered 5+ technical training sessions on advanced data engineering topics like Data Warehousing, Advanced SQL and Azure Data Factory to a team of 15 colleagues, improving team efficiency by 25%.
3. **Spot Recognition – Aug 2022,** Addend Analytics, India
   Recognised for quality and timely delivery of 'Navitas Semiconductor' project.