SUDHARSAN UDHAYAKUMAR

Data Scientist | Machine Learning Engineer
Software Engineer turned AI Practitioner

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SUMMARY

Results-driven Data Scientist with a solid foundation in machine learning, deep learning, and cloud integration. Experienced in developing and deploying classification, clustering, anomaly detection, and predictive modeling solutions. Proficient in Python, SQL, TensorFlow, and Power BI/Tableau for advanced analytics and visualization. Skilled in designing scalable data pipelines and deploying intelligent solutions on AWS, Azure, and GCP. Combines software engineering acumen with analytical thinking to tackle complex, real-world data challenges. Highly adaptable, innovative, and committed to delivering data-driven, production-ready solutions in dynamic, cross-functional teams.

ACADEMIC PROFILE

IFET College of Engineering
B.E-ECE May 2024 | CGPA 8.49
Ramakrishna Vidyaalaya.Ma.Hr.Sec.School
HSC March 2020| Percentage : 81.3
SSLC March 2018 | Percentage : 82.6

TECHNICAL SKILLS

Programming Languages
Python, SQL, C#, Java, HTML, CSS

Machine Learning & Deep Learning
Scikit-learn, TensorFlow, Keras, OpenCV, Transfer Learning, Zero-shot Learning

Data Visualization
Power BI, Tableau, Matplotlib, Seaborn, Excel

Cloud Platforms & Deployment
AWS (S3, EC2), Azure (Data Factory, Cosmos DB, Service Bus), GCP (App Engine, BigQuery)

Data Engineering & Pipelines
ETL Pipelines, API Integration, Azure Functions, Azure Storage

Tools & Utilities
Postman, Bruno, Visual Studio, Google Colab, Azure DevOps, Git, GitHub, Key Vault

CERTIFICATES

- **Machine Learning and AI Services on AWS |** IITM-GUVI.
- **Advanced Diploma in Python Programming |** CSC.
- **IoT, Image Processing, Machine Learning |** NPTEL.
- **GenAI Powered Data Analytics |** Tata.
- **Data Science and Analytics |** IITM-GUVI.

RESEARCH PROJECTS

- Enhancing Brain and Kidney Tumor Detection - Deep Learning Technique
- Aggressive Behavior Detection and Alert system using deep learning techniques.

INDUSTRIAL EXPERIENCE

Data Science & AI Program Learner | IIT Madras – GUVI
Jun 2025- Present

Completed an industry-aligned program focused on Machine Learning, Deep Learning, NLP, and model deployment.Gained hands-on experience with Python, TensorFlow, cloud platforms, transfer learning, clustering, anomaly detection, and zero-shot learning.

Key Projects:

- **Multiclass Fish Image Classification** – Built and deployed a CNN model using transfer learning for real-time species recognition.
- **PhonePe Transaction Insights** – Analyzed regional transaction trends and visualized insights using Python and Power BI.
- **Luxury Housing Sales Analysis** – Bengaluru – Performed EDA and regression modeling to uncover pricing and demand patterns.
- **Amazon Music Clustering** – Applied unsupervised learning to segment music tracks based on user engagement and metadata.
- **Content Monetization Modeler** – Predicted monetization potential using regression and feature engineering on engagement metrics with 99% R2 score.
- **Hyperlocal News Anomaly Detection** – Built an NLP pipeline to detect anomalies and attribute sources; deployed on GCP/AWS.
- **Zero-Shot Visual Anomaly Detection** – Designed a computer vision system for defect detection using few-shot learning and deployed on cloud.

KAAR INFOTECH PVT LTD | Software Engineer Trainee
May 2024-May 2025

Automated Microsoft event analytics using .NET and SQL, streamlining data pipelines for registration and session tracking.Built responsive tools and managed large datasets with Azure Cosmos DB and Service Bus to ensure data integrity and reporting efficiency.

Key Projects:

- **Event Orchestration Service (EOS)** – Designed data workflows for Microsoft event registrations and sessions; transmitted structured JSON via Azure Service Bus.
- **Data Comparison Tool** – Built a .NET tool to detect discrepancies between raw and processed data, ensuring accuracy.
- **Registration Analytics Dashboard** – Developed dashboards using SQL and Power BI to visualize attendance and scan trends.