Arun Arumugam

Data Scientist

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🪪 Summary

Aspiring Data Scientist with a solid foundation in Python, SQL, and machine learning. Proficient in developing data-driven solutions through exploratory data analysis (EDA), predictive modeling, and deep learning. Experienced in building interactive dashboards and deploying machine learning models in web applications. Demonstrates a strong passion for uncovering insights from data and leveraging analytical skills to solve real-world problems. Eager to contribute to a dynamic team where innovation and data-driven decision-making are key.

🧠 Skills

Languages: Python, SQL

Machine Learning: Algorithms, Deep Learning, NLP, GenAI, Mathematical Foundations

Data Analysis & Visualization: EDA, Data Cleaning, Visualization, Power BI

Tools & Technologies: Excel, PostgreSQL, MySQL, MongoDB, Flask, Streamlit, API, Docker, AWS, Git, GitHub

Soft skills: Analytical Thinking, Problem-Solving, Communication & Storytelling, Collaboration, Adaptability, Attention to Detail, Data-Driven Decision Making

📂 Projects

Exoplanet Habitability and Earthlikeness Prediction
Key Skills: Python, Machine Learning, Sci-kit Learn, Flask, Data Analysis
- Developed a machine learning model with **87% accuracy** to assess exoplanet habitability and Earth-likeness using classification and regression techniques. Built a Flask web application for interactive visualizations, enhancing user experience and providing actionable insights. Improved model accuracy by **15%** through advanced feature engineering and rigorous validation.

Potato Disease Classifier
Key skills: Python, Deep Learning, TensorFlow/Keras, Docker, FastAPI, Flask, Image Classification
- Built a deep learning model using convolutional neural networks (CNNs) that achieved **96% accuracy** in classifying potato diseases. Trained on a dataset of over **2,000 images**, with data augmentation enhancing robustness by **20%**. Deployed an interactive dashboard using Flask and FastAPI, and utilized Docker for consistent deployment, reducing deployment time.

Smart Course Recommendations Using NLP and Clustering
Key skills: Python, NLP, Clustering, Sci-kit Learn, Data Analysis
- Developed a course recommendation system using Natural Language Processing (NLP) and clustering techniques, analyzing over **1,500 course descriptions**. Improved recommendation relevance and achieved a model accuracy of **87%**, providing tailored suggestions for diverse learning preferences.

FMCG Sales Insights Analysis
Key skills: PowerBI, MySQL, ETL, Data Analysis, EDA, Data Modeling
- Analyzed **10,000+ sales records** for an FMCG company using MySQL and PowerBI, cutting processing time by **50%** through optimized ETL processes. Designed an interactive dashboard that enhanced decision-making efficiency, highlighting key insights and profit metrics.

PhonePe pulse data visualization
Key skills: Python, Pandas, Streamlit, Plotly, PostgreSQL, Data Extraction, Data Transformation, Database Management
- Developed an interactive dashboard to visualize PhonePe Pulse data, using Python and Pandas for extraction and cleaning. Built with Streamlit and Plotly, the dashboard dynamically updates by querying a PostgreSQL database, providing real-time insights and enhancing data-driven decision-making.

🛡️ Certifications and Specializations

IBM Data Science Specialization: 🔗 IBM(Coursera)

Machine Learning Specialization: 🔗 Stanford University, DeepLearning.AI (Coursera)

Gen AI for Data Scientists Specialization: 🔗 IBM(Coursera)

Python for Everybody Specialization: 🔗 University of Michigan(Coursera)

Mathematics for Machine Learning: 🔗 Imperial College of London(Coursera)

Google AI Essentials: 🔗 Google(Coursera)

🎓 Education

Bachelor of Engineering in Mechanical Engineering (B.E.) | 2017 – 2021
IFET College of Engineering | CGPA: 8.24

💼 Professional Experience

Jr. Detailer | May 2021 – Sep 2023
Maestro steel detailing Inc. | Chennai, India
- Successfully completed 15+ projects, demonstrating proficiency in structural detailing and modeling.
- Contributed significantly to the detailing efforts for the company's costliest project, resulting in substantial cost savings and improved project efficiency.
- Received accolades from multiple management heads for exceptional attention to detail and dedication to quality in project execution.
- Demonstrated exceptional attention to detail in structural designs, ensuring precision and accuracy in project specifications, which contributed to the successful completion of complex projects and optimized resource allocation.