MARIKANNAN P

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OBJECTIVE

As a data science student, I am passionate about uncovering insights from data and applying them to real-world challenges. I am seeking a data scientist role where I can leverage my analytical and programming skills to generate actionable insights and drive data informed decisions.

SKILLS

Technical Skills

- **Programming Languages:** Python, R, SQL
- **Python Libraries:** Pandas, NumPy, scikit-learn, TensorFlow
- **Data Visualization:** Tableau, Power BI, Matplotlib, Seaborn
- **Machine Learning Techniques:** Regression, Classification, Clustering.
- **Data Wrangling:** Data cleaning, transformation, and preprocessing
- **Cloud Platforms:** Familiar with AWS and Microsoft Azure
- **Statistics & Probability:** Understanding of core statistical concepts and techniques

Soft Skills

Decision Making | Problem Solving | Leadership | Communication Skills.

EDUCATION

Bachelor of Engineering in Computer Science and Engineering (Data Science)
Annamalai University, Tamil Nadu, India.
Nov 2021 – May 2025
Cumulative CGPA (Up to 7th Semester): 7.0

INTERNSHIP EXPERIENCE

Data Analyst Intern
YBI Foundation – Remote
May 2023 – Jun 2023
• Developed a linear regression model using Python, Pandas, NumPy, and scikit-learn to predict vehicle mileage (MPG).
• Provided actionable insights for manufacturers, consumers, and policymakers through data visualization with Matplotlib and Seaborn.

Data Science Intern
Shiash Info Solutions Pvt. Ltd., Chennai.
Jun 2024 – Jul 2024
• Built a predictive model using Python, scikit-learn, and Jupyter Notebook to estimate health insurance charges.
• Conducted Exploratory Data Analysis (EDA) with Pandas and Seaborn to identify key factors influencing insurance costs and improve prediction accuracy.

PROJECTS

Spam Email Detection and Classification System

- Developed a machine learning model to classify email messages as Spam or Ham using a Naive Bayes classifier and TF-IDF vectorization.
- Performed data preprocessing with NLTK, including tokenization, stopword removal, and stemming to clean over 5,000 messages from two datasets.
- Built interactive visualizations such as bar plots, pie charts, and violin plots to analyze data distribution and model performance metrics.
- Achieved 83.76% accuracy, with 89% precision, 79% recall and an F1-score of 84% on test data.
- Integrated Gmail IMAP to fetch and analyze live emails, predicting spam probability for each message and saving the results to CSV.

Tech stack: Python, scikit-learn, NLTK, TF-IDF, Naïve Bayes, Google Colab, Gmail IMAP, Matplotlib, Seaborn.

Smart ADAS (Advanced Driver Assistance System) – Jetson Orin Nano + Arduino

- Designed and implemented a modular ADAS prototype with forward collision warning, automatic braking, lane detection and real-time sensor alerts.
- Integrated TF Luna, VL53L0X and ultrasonic sensors with Arduino Mega for real-time obstacle monitoring.
- Developed computer vision modules on Jetson Orin Nano using OpenCV to detect lanes, stop signs using Haar cascades and pedestrians using HOG.
- Created a web-based dashboard using Flask, HTML and JavaScript to stream live camera feed, sensor data and joystick-based vehicle control.
- Implemented adaptive cruise control logic with speed scaling based on obstacle distance.

Tech Stack: Python, OpenCV, Flask, Arduino IDE, Jetson Orin Nano, CAN Bus, Serial Communication, Embedded C

CERTIFICATIONS
• Deep Learning (NPTEL – IIT Kharagpur)   • Python for Data Science (IBM)
• Data Analysis with Python (IBM)   • Data Visualization with Python (IBM)

LEADERSHIP & RESPONSIBILITIES
• **Faculty Cricket Team Captain** – Inter-Faculty Tournament
Successfully led the faculty cricket team to the runner-up position. Demonstrated leadership, match planning and team coordination, guiding the team through four matches and achieving the runner-up position.

• **Sports Secretary** – Department of CSE, Annamalai University, Tamil Nadu.
Planned and organized a departmental sports meet involving 400+ participants and 20+ events. Managed all aspects of event coordination, ensuring smooth execution and active student participation.