NIRMAL THAMBI

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PROFESSIONAL GOAL

Postgraduate in Data Science with a PG Diploma in Big Data, skilled in statistical analysis, machine learning, and data visualization. I enjoy turning complex data into clear insights that support smarter decisions and real-world impact. Focused on building scalable solutions that drive innovation, efficiency, and value across industries.

WORK EXPERIENCE

Data Science Intern   May 2024 – July 2024

ENTRI ELEVATE   Ernakulam, India

- Designed predictive models for IPL match outcomes using regression and ensemble methods.
- Conducted data preprocessing, feature engineering, and categorical encoding.
- Delivered outcome-prediction functions and created visualizations to analyze match statistics.

Research & Development Intern   Jan 2023 – June 2023

DYOCENSE   Bangalore, India

- Completed data cleaning and data validation of existing spreadsheets to promote robust data management platform,
- resulting in accurate data analysis and entry.
- Performed routine tasks under direct supervision and within established procedures and guidelines.
- Identified, analyzed, and interpreted trends or patterns in complex data sets by finding correlations and visualizing with charts.
- Used modeling and analytics to understand how business decisions impacted bottom line.
- Created dashboards to monitor and track key performance indicators.
- Deployed predictive analytics models to forecast future trends.
- Created data models to support decision-making processes.

PROJECTS

CarioNet: Automated Dental Caries Segmentation with U-Net   June 2025 – August 2025

- Developed a U-Net deep learning model to segment dental caries in panoramic radiographs.
- Implemented automated image preprocessing and augmentation to improve model robustness.
- Applied thresholding and post-processing techniques to enhance segmentation accuracy.
- Leveraged Python, TensorFlow, OpenCV, and Scikit-image for model development.
- Trained the model using Binary Crossentropy loss and evaluated with Accuracy metrics.
- Optimized the pipeline for efficient training and inference on panoramic radiographs.
- Delivered an AI-powered diagnostic aid to support early detection of dental caries.

IPL Score Prediction using Machine Learning   May 2024 – July 2024

- Utilized machine learning algorithms to analyze key match factors and predict final scores.
- Cleaned and prepared data from match records, including team and player statistics.
- Applied feature encoding to handle categorical data effectively.
- Evaluated model performance with metrics such as MAE, MSE, and RMSE to ensure accuracy.
- Created visualizations to represent trends in runs and wickets.

Link https://github.com/Ntrmal/Machine_learning_and_Deep_learning.git.

Battery Voltage & Engine Efficiency Prediction (OBD Data)   January 2023 – June 2023

- Developed and implemented a predictive model for engine efficiency using OBD data.
- Utilized machine learning algorithms to identify key factors influencing fuel consumption and optimize performance.
- Conducted a comprehensive analysis of OBD data to assess battery health and performance.
- Implemented statistical models to predict battery life based on voltage readings and environmental factors.

SKILLS

Technical Skills

- Programming: Python, R, SQL, Java, MongoDB
- Data Science: Machine Learning, Predictive Analytics, Statistical Modeling
- Visualization: Tableau, Plotly Dash
- Big Data Tools: Hadoop, Spark, AWS, Apache Kafka
- Deep Learning frameworks :TensorFlow, PyTorch
- Cloud platforms: Azure, AWS
- Other: Excel, Forecasting, Data Cleaning & Wrangling

SOFT SKILLS

- Communication & Presentation | Quick Learner | Problem-Solving | Adaptability | Result-Oriented

EDUCATION

- PG Diploma in Big Data Analytics – CDAC (2025 – Present)
- M.Sc. Data Science – Christ University, Bangalore (2021 – 2023) | CGPA: 3.17/5
- BCA – St Joseph's College, Devagiri (2017 – 2020) | CGPA: 4.13/6
- Class 12 – Vijaya HSS, Kerala (91%)

CERTIFICATIONS

- Data Science & Machine Learning Certified User – Illinois Institute of Technology (2024)
- Certified Data Science Intern – Dyocense (2023)
- Introduction to C# – Sololearn (2023)
- Fundamentals of Data Science – Internshala (2022)
- Data Sharing – Global Health Training Centre (2022)