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## PROJECTS

- **Driver Behaviour Classification App (ANN)** ([Web app](#)): Built a Python pipeline that extracts features from vehicle telematics data and trains an ANN in TensorFlow/Keras to classify driving behaviour; applied class-weighting and threshold tuning for imbalance, evaluated model performance, and exposed the model through a Streamlit interface.
- **Used Car Price Prediction and Resale Value Classification App (ML)** ([Web App](#)): Built a machine learning pipeline to predict used car prices and classify resale value. Cleaned and prepared data, engineered features, and created preprocessing pipelines. Trained and tuned regression and classification models in Python using GridSearchCV, evaluated performance metrics, and saved the best models. Deployed the models in a Streamlit.
- **AI-Driven Flood and Landslide Prediction System** *Role: Vice Captain | Model Developer & System Integrator*: Role: Vice Captain | Model Developer & System Integrator: Developed and integrated an LSTM-based flood prediction system using TensorFlow for short-term forecasting. Built the backend with Flask and connected real-time data sources, including HERE Geocoding for location mapping, Visual Crossing Weather for live weather data, and Google Translate for multilingual support. Handled data preprocessing and feature preparation using Pandas, Scikit-learn, and NLTK. Integrated frontend and backend components, resolved API and deployment issues. [GitHub Link](#)
- **Power BI Project** *Role: Data Analyst*: Built a Power BI dashboard on the impact of COVID-19 on students using **DAX**, **sliders**, and **interactive charts**. Cleaned and transformed data using **Power Query**. Identified behavioural trends, and refined dashboard visuals based on mentor feedback to enhance accuracy and clarity of insights.

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## CERTIFICATION

- **The Complete Machine Learning Course**: Applied dimensionality-reduction techniques (PCA, LLE, t-SNE, MDS, ISOMAP, Fisher Discriminant Analysis) to analyze structure, clustering, and class separability in high-dimensional data before model selection. Implemented Linear, Ridge, and Lasso regression to evaluate regularization effects and feature weighting. Used SVMs for classification and regression with linear, polynomial, and RBF kernels based on data nonlinearity. Built neural networks for regression and classification when higher model capacity was required. Implemented Naive Bayes, Quadratic Discriminant Analysis, Logistic Regression, and K-Nearest Neighbors as baselines or when interpretability and computational efficiency were priorities. Followed a model-agnostic workflow in Python: data analysis, multi-model experimentation, performance comparison, and algorithm selection based on problem constraints. [UC-cb3f9dab-Oa84-457e-b62e-067f2ca1b825](#) || [Personal Learning Project](#)
- **Data Analysis Course By Google**, 1) **Ask Questions to Make Data-Driven Decisions** – Applied structured thinking and problem-solving to data-driven decision-making. Used spreadsheets for organizing, analysing, and presenting data to support business insights. [Ask Questions to Make Data-Driven Decisions Certification | Coursera](#)  
2) **Foundations: Data, Data, Everywhere** : Learned core concepts of data analytics, data ecosystems, and analyst roles. Gained hands-on experience with spreadsheets, SQL, and Tableau for data collection, processing, and visualization. [Foundations: Data, Data, Everywhere | Coursera](#)
- **Python, HackerRank course**: Gained intermediate proficiency in Python, covering OOP, error handling, file I/O, data structures (lists, dictionaries, sets), scalar types, operators, control flow, strings, iteration, modularity, and classes. [Basics Of Python Certification](#)

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## EDUCATION HISTORY

- **Bachelor of Technology in Computer Science And Engineering** 2021 - 2025, College Of Engineering Poonjar
- **Higher Secondary Examination (12th)**, 2018 – 2020, Computer Science
- **Secondary School Leaving Certificate Examination (10th)**, 2017 - 2018, *Central Board Secondary Education*,

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## ADDITIONAL INFORMATION

- **Known languages**:
  1. Malayalam - Native or bilingual proficiency
  2. English - Professional working proficiency
  3. Hindi - Elementary proficiency