Govindaraj

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github.com/Govind2k5 | govind2k5.github.io/My-Portfolio

Education

PES University — Bengaluru, India
B.Tech in Computer Science and Engineering ***(CGPA: 8.5)*** — *Exp. June 2027*

- **Awards:** 2× CNR Rao Merit Scholarship, 3× Distinction Award
- **Relevant Coursework:** Data Structures & Algorithms, Object-Oriented Programming (OOP), Operating Systems, Computer Networks, Linear Algebra, Computer Architecture, Software Engineering, DBMS, Machine Learning, Cloud Computing.

The PSBB Millennium School — Puducherry, India
Class XII (CBSE) – ***89.6%*** — *June 2022*

Skills

Languages: Python, Java, C, JavaScript, HTML/CSS
Libraries & Data: NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, PyTorch
Databases: MySQL, Neo4j, Redis
Developer Tools: Git, GitHub, Docker, VS Code

Experience

Center for Data Sciences & Applied ML (CDSAML) — Bengaluru, India
Research Intern (Cloud Computing & Big Data) — *June 2025 – July 2025*

- Worked under the guidance of Dr. Shylaja S.S. on a research project focused on hate speech detection using both Deep Learning and Large Language Models (LLMs).
- Developed and tested these models independently to identify harmful content on social media platforms.
- Evaluated the results to determine the effectiveness of each approach in flagging offensive posts.

Projects

Bitcoin Price Prediction | *Python, PyTorch (LSTM), Streamlit, Scikit-learn*

- Designed and trained a Long Short-Term Memory (LSTM) neural network using PyTorch to forecast Bitcoin prices based on 60 days of historical OHLCV market data.
- Achieved a training loss of <0.001 during the validation phase by optimizing the model architecture for better accuracy.
- Deployed the model via a Streamlit web interface, allowing users to visualize 30-day future price trends through interactive and dynamic line charts.

FinSecureDB | *SQL (MySQL), Python, Stored Procedures*

- Designed a relational database to manage complex banking entities including customers, loans, branches, and transaction logs, ensuring strict data integrity.
- Automated backend financial operations by writing complex SQL Triggers and Stored Procedures to handle interest calculations and balance updates in real-time.
- Integrated a Python-based front-end application to execute CRUD operations, providing a seamless interface for bank administrators to manage account security and data integrity.

Airline Ticket Price Prediction | *Python, Scikit-learn, Random Forest*

- Developed a model using a Random Forest Regressor to predict dynamic flight prices, achieving a high R^2 score of 0.985 (MAE $\approx$ Rs. 1,086).
- Utilized 'ColumnTransformer' to automate feature extraction, applying One-Hot Encoding for categorical airline routes and standard scaling for numerical time-series data.
- Performed Hyperparameter Tuning to optimize the number of estimators and tree depth, significantly reducing overfitting and improving generalization on unseen test data.

IPL Data Analysis (2008–2024) | *Python, Pandas, Matplotlib, Seaborn*

- Conducted Exploratory Data Analysis (EDA) on a dataset spanning 16 years of IPL matches to identify key winning factors, including toss decisions and venue-specific advantages.
- Visualized complex correlations between teams and match outcomes using Seaborn heatmaps and bar charts, deriving actionable insights on player performance and team consistency.