Rishi Mahiya

Bachelor of Technology
in Computer Science and Engineering
Indian Institute Of Technology, Ropar

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Education

Degree	Institute/Board	CGPA/Percentage	Year
Bachelor of Technology	Indian Institute of Technology, Ropar	6.64 (Till 5th Sem)	2022-2026
Senior Secondary	Central Board of Secondary Education	90.6%	2022
Secondary	Central Board of Secondary Education	81.6%	2020

Projects

- **Bank Marketing Campaign Prediction**
  Predictive analysis project to forecast client term deposit subscriptions based on banking campaign data. **GitHub**
  – Built a machine learning model to predict client subscription to term deposits, achieving 79.5% accuracy with a Gradient Boosting Classifier.
  – Identified key features (e.g., Consumer Price Index, Euribor 3-month Rate) to enhance campaign efficiency and focus on high-potential clients.
  – Utilized Python (Pandas, NumPy, Scikit-learn) and Google Colab for data analysis, visualization, and model training.

- **Credit Card Fraud Detection**
  End-to-end machine learning project to identify fraudulent credit card transactions using Kaggle's dataset. **GitHub**
  – Built Models: Logistic Regression, Random Forest, Gradient Boosting, and SVM, prioritizing Precision and F1-Score due to class imbalance.
  – Techniques Used: Applied SMOTE for oversampling, feature scaling, and PCA-based feature extraction to enhance model performance.
  – Results: Achieved 99.81% accuracy with Decision Tree Classifier using oversampling, ensuring robust fraud detection.

- **Dog breed identification project**
  Deep learning project to classify dog breeds using images from Kaggle's dataset. **GitHub**
  – Model: Built a Convolutional Neural Network (CNN) using TensorFlow, trained on labeled images with 80% for training and 20% for validation.
  – Evaluation: Used Google GPU resources for model training, monitored performance, and visualized results with Matplotlib to track accuracy and loss.
  – Results: Achieved 99.87% accuracy, visualized predictions with color-coded probabilities (green for correct, red for incorrect).

- **Other Projects**
  Includes institute and personal projects
  – RISCV-Assembler **GitHub**
    * Created a risc-v assembler in CS-204 course. Which can execute assembly language.
    * It also incorporates various optimization methods such as various branch predictors methods such as always taken, always not taken, one bit dynamic and two bit dynamic.
    * Created mainly using C++.
  – Daily journal **GitHub**
    * A blogging web app created using NodeJs and mongodb.
    * Includes an authorization page for register and login which are required to be able to compose any blog.
    * The authorization is created using the passport module.

Programming languages

- **Programming Languages**: C/C++, Python, JavaScript
- **Frameworks and libraries**: REST API, MongoDB, TensorFlow
- **Data Science and Machine learning**: NumPy, Pandas, Scikit-learn, Matplotlib

Key courses taken

- **CSE & Maths**: Algorithms and Data Structures, Probability and Statistics, Computer Architecture, Programming Paradigms and Pragmatics, Digital Logic Design
- **Others**: Economic, Signal and systems

Positions of Responsibility

- **Core Member**, SWE Club, IIT Ropar
  – Coordinated with guest speakers and managed communication to facilitate technical events.