Eshika Ranjan Singh

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Education

Vellore Institute of Technology, Bhopal, B.Tech in Computer Science and Engineering (AI-ML spec.) Sept 2023 – August 2027

- CGPA: 8.89/10.00 (link to grade history)

Experience

Machine Learning Intern(Remote),**Smartbridge** May 2025 – June 2025

- Implemented various machine learning algorithms to predict adult's income.
- Deployed the end-to-end project with Flask with interactive user interface
- Collected IBM "Journey to Cloud" and "Getting started with AI" badges

Project Intern(Onsite), **National Institute of Technology, Patna** May 2025 – June 2025

- Developed a lightweight machine learning model for prediction of Credit Card Frauds
- Enhanced accuracy and Recall than several other projects
- Wrote a paper that got accepted for presentation at "**ICCCNet2025**" and for publication in the **conference proceedings** published by **Springer** in Lecture Notes in Networks and Systems series.

Contributor,**GirlScript Summer of Code (Extd.)** Oct 2024- Nov 2024

Societies

AnteriX Club, VIT - Bhopal March 2025 - Present

StartUp Club, VIT - Bhopal Aug 2024 - May 2025

Projects

Vigilant AI: Intelligent test monitoring system link/vigilant-ai

- (Group Project) AI-model for test monitoring platform that identifies cheating behaviors through camera, microphone, and screen activity, ensuring the integrity of online exams using cutting edge technologies.
- Some of the features:
  - Portal for teachers to assign test and mark them.
  - Portal for students to take tests and see the result.
  - While taking test: Face detection and identification, head pose detection and eye tracking models
- Tools Used: html, css, javascript, react framework, mediapipe, opencv, tensorflow, mysq

SereniBOT-Mental health chatbot Link/SereniBOT

- (Group Project) This chatbot is an AI-powered virtual assistant designed to provide mental health support, guidance, and self-care strategies to users.
- It interacts with individuals through text or voice-based conversations, using NLP to understand user inputs, analyze emotional states, and provide relevant responses.
- Tools Used:
  - Frontend: HTML, CSS, JavaScript (React)
  - Backend: Python (Flask/Django)
  - Database: MySQL/MongoDB
  - NLP Model: Pre-trained AI model for conversational support

Credit Card Fraud Detection Model Link to Model

- Initiated a machine learning project to identify fraudulent transactions using a real-world anonymized dataset.
- Performed data cleaning and preprocessing, including handling missing values, feature scaling, and class imbalance analysis.
- Conducted exploratory data analysis (EDA) to understand transaction patterns and detect anomalies.
- Implemented classification algorithms such as Logistic Regression, Random Forest and Decision tree for fraud prediction.
- My model performed better in terms of overall accuracy, recall and area under ROC curve compared to several other projects.

Tools Used: Python, Pandas, NumPy, Scikit-learn, Jupyter Notebook, Matplotlib, Seaborn

- **Financial Forecasting on Adult's Income Prediction model** Link to Model
  - Created an end-to-end machine learning project with interactive user interface to identify Adult's Income.
  - Tools Used: Python, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, Google Colab, Flask, HTML, CSS

Technologies

Languages: C++, C, Java, SQL, JavaScript, Python(with its libraries)

Technologies: HTML, CSS, Machine Learning, .NET, Microsoft SQL Server, UI/UX, Linux, Arduino, Git, Github, LaTeX