Komal Srivastava

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EDUCATION

VIT Bhopal University — Sehore, Madhya Pradesh
Bachelor of Technology, Computer Science – CGPA: 8.02 — *Sep. 2022 – May 2026*

St. Mary Goretti Girls High School — Asansol, West Bengal
Higher Secondary Examination – Percentage: 62% — *April 2020 – April 2021*

St. Mary Goretti Girls High School — Asansol, West Bengal
Secondary Examination – Percentage: 60% — *April 2018 – April 2019*

PROJECTS

Heart Disease Prediction System | *Python, Flask, HTML, CSS, Bootstrap* — September 2024 – Present

- **Tech Stack & Tools:** Developed using Python **(Flask)** for backend, **Scikit-Learn** for machine learning, and **HTML, CSS, Bootstrap** for frontend. The trained model was stored using **Pickle.**
- **Data Processing:** Used the **Heart Disease Cleveland** dataset, performed data cleaning, handled missing values, and applied feature scaling with **StandardScale**r.
- **Model Training & Selection:** Trained multiple models **(Random Forest, Gradient Boosting, SVM, Logistic Regression, KNN, Decision Tree)** and used **cross-validation** to choose the best-performing model.
- **Performance Evaluation:** Assessed model performance using **accuracy, confusion matrix, and classification report**, and visualized results with **Matplotlib & Seaborn**.
- **Deployment:** Integrated the model into a **Flask API**, built a **responsive UI** using Bootstrap, and deployed the best model for real-time heart disease prediction.

Fake News Detection System | *Python, Flask, HTML, CSS, Bootstrap* — Jan. 2024 – May 2024

- **Tech Stack & Tools:** Built using Python **(Flask)** for backend, Scikit-Learn for machine learning, and **HTML, CSS, Bootstrap** for the frontend. The trained model was stored using **Pickle**.
- **Data Processing & Model Training:** Applied **TF-IDF vectorization** for text preprocessing and trained a machine learning model to classify fake news.
- **Model Loading & Prediction:** Loaded the vectorizer and trained model **(vectorizer.pkl, finalized_model.pkl)**, processed user input, and predicted whether the news is **Fake or Real**.
- **Web Interface:** Developed a **Flask-based web app** with multiple pages (**Home, Prediction, Contact Us, About Us**) and a user-friendly input section for fake news detection.
- **Deployment:** Integrated the trained model with **Flask API**, built a **dynamic UI** using Bootstrap, and displayed prediction results interactively.

RFID Smart Door Lock| *Arduino, Arduino IDE, RFID Modules, C++* — Jan. 2024 – May 2024

- **Technology Used:** Built using Arduino, RFID Module **(MFRC522)**, Servo Motor, and SPI Communication for secure access control**.**
- **Functionality:** The system scans RFID cards, compares the **UID** with a predefined **authorized ID**, and operates the servo motor to lock/unlock the door.
- **Automation & Security:** Ensures automated door operations, allowing seamless and secure access for over **30 personnel**.
- **Code Workflow:** Initializes **RFID module and servo**, reads card UID, verifies authentication, and **controls the door lock state** accordingly.
- **Real-World Application:** Provides a **cost-effective, efficient, and secure** access control system, ideal for **homes, offices, and restricted areas**.

CERTIFICATIONS

- **NPTEL-** Cloud Computing
- **Coursera-** The Bits and Bytes of Computer Networking
- **Vityarthi-** Python Essentials

TECHNICAL SKILLS

Languages: Java, Python, C++, SQL (Postgres), JavaScript, HTML/CSS
Frameworks: React, Node.js, Flask, WordPress, Bootstrap
Developer Tools: Git, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Arduino IDE
Libraries: pandas, NumPy, Matplotlib, Scikit-Learn