MALHAR INAMDAR

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Education

Pune Institute of Computer Technology, India Sep 2023 - 2027

BE Bachelor of Engineering in Electronics and Telecommunications *9.23/10.00*

Coursework: Data Structures, CAD, Digital Circuits, Arduino, Engineering Mathematics

MOOCS: Machine Learning Specialisation, Deep Learning Specialisation

Technical Skills

Programming Languages: Python, C++, C

Tools & Frameworks: PyTorch, Tensorflow, Langchain, NumPy, Pandas, OpenCV, Scikit Learn, spaCy, ROS

Software: Git, Github, Flask, VS Code, Streamlit

Experience

Pune Institute of Computer Technology Sep 2024 – Present

Research Intern *Pune, India*

- Working on writing a research paper on improving diagnostic efficiency in diabetes prediction using explainable AI tools like LIME and SHAP.

PICT Robotics Oct 2023 – Present

Technical Member *Pune, India*

- Member of the Robotics Club of the college, contributed in the assembly of the robots for ABU Robocon 2024.
- Built multiple robots with esp32, sensors and motors like line following, ultrasonic sensor robot.
- Learnt tools and frameworks including Fusion360, Kicad, Arduino

Projects

MCQ Generator Webapp Github Link

Streamlit, Gemini LLM *Website*

- Webapp built for generating multiple choice questions by analysing a piece of text to be input by the user in .txt or pdf format.
- The mcqs generated can be in varying order of difficulty as per the choice of user, easy, medium or hard.
- Number of questions are also to be input by the user as per their requirement.
- Used gemini-1.5-flash model, planning to replace it with T5 and BERT models using NLP.

DiabetesCare AI Github Link

Streamlit, Scikit Learn, GridSearch, RandomForest, NumPy, Pandas, seaborn, Gemini LLM *Website*

- Webapp for diabetes Prediction using machine learning based on multiple parameters including height, weight, blood sugar, smoking history, haemoglobin.
- Implemented SMOTE(Synthetic Minority Oversampling Technique) for handling imbalanced dataset and tuned hyperparameters using GridSearch for optimising accuracy. Achieved high accuracy of the model 94%
- Patients detected positive are provided helpful suggestions using gemini-1.5-flash LLM model.
- Q&A Chatbot provided to solve patient queries with chat history saved for anytime access.

Harvestify Github Link

Streamlit, Scikit Learn, Logistic Regression, NumPy, Pandas, seaborn, matplotlib *Website*

- Webapp for agricultural crop recommendation using machine learning. The user can provide the soil data from their side and the application will predict which crop should the user grow.
- The input parameters include nitrogen, phosphorus, potassium content, temperature, humidity, ph and rainfall. Achieved high accuracy on the logistic regression model 95%.
- Used logistic regression algorithm for its working since the output (crop) was fixed having 20 specific crop types and the input parameters could vary.

Awards

Cretronix Runner-up Credenz'24 April 2024

- Our team of two, was the runner-up in the electronics circuit and microcontroller programming competition at PICT IEEE's annual technical fest Credenz.