Noman Yousaf

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Skills

Languages: C/C++, Python, R, Rust, Java, SQL

Technologies & Tools: Arduino, MPU and IR sensors, Processing, HTML, CSS, Figma (UI Prototyping), Tkinter (UI Design), Pandas, NumPy, Matplotlib, Flask, PyTorch, TensorFlow, Web Scraping (Beautiful Soup), Latex, Docker, Git, GitHub, Linux (Parrot OS), Jenkins, A/B Testing.

Soft Skills: Problem Solving, Leadership, Presentation Skills, Communication Skills, Teamwork, Continuous Learning, Adaptability

Education

FAST National University of Computer and Emerging Sciences Aug 2020 - Jan 2025
Bachelor of Science in Computer Science
Relevant Coursework: Object Oriented Programming, Data Structures, Database Systems, Artificial Intelligence, Data Science, Cloud Computing, Software Engineering, Computer Networks, Digital Image Processing, Natural Language Processing, Advanced Programming.

Project Work

- **Smart Pen for Digital Writing (Final Year Project, 2024):** Currently developing a smart pen that captures handwriting and saves it automatically. The pen uses Arduino MPU and a touch IR sensor to track and record movements. Initially, we used Processing Canvas to visualize the handwriting on screen. Now, the project is integrated with an Android app, with plans to add features like a live board for sharing content with other screens in real-time.
- **CNN Emotion Detection and Music Suggestion System (Summer 2023):** Developed a Convolutional Neural Network (CNN) to detect emotions from facial expressions using the FER2013 dataset. The project includes a web application built with Streamlit that provides real-time emotion detection and suggests music based on detected emotions. Implemented data preprocessing, model training, and a user-friendly interface, showcasing integration of deep learning with practical applications in user experience.
- **Word Prediction with Bigram and Trigram Models (Spring 2024):** Developed an intelligent system capable of predicting the next word in a sentence using bigram and trigram models. The project involved building and training models using Python, preprocessing text data, and developing a web interface using HTML and CSS for real-time user interaction. Also led the testing and optimization of the prediction function to ensure accurate and efficient performance.
- **Strategies for Improving Product Quality at FF Steel (Fall 2023):** Conducted a detailed analysis of strategies to enhance product quality at FF Steel. The project focused on identifying critical areas for improvement, such as quality standards, supplier quality assurance, and advanced technology integration. Key aspects included implementing rigorous quality control processes, training programs for employees, and utilizing modern technology to reduce human error. The report concluded with recommendations for adopting a formal Quality Management System (QMS) and fostering a culture of continuous improvement.

Awards and Certificates

- **Funding from Ignite:** Received funding for the final year project, ”A Smart Electronic Pen,” after being shortlisted for support.