SOHAIB ZAFAR

chmsohaib
701@gmail.com — <u>Fiverr</u> — <u>LinkedIn</u> — <u>GitHub</u> — +923225482701

Projects

Final Year Project

• AI Autonomous Drone Forest Mapping and Trees Age & Species Detection Funded by Forestry Environment & Wildlife Department, Khyber Pakhtunkhwa

Designed and implemented an AI-powered autonomous drone system for forest mapping and analysis, funded by the KP Forest Department. A web interface using HTML, CSS, JavaScript, and Google Maps API allows users to select forest regions and flight paths. These paths are injected into the DJI Mini 4 Pro drone to capture aerial imagery.

Python-based backend processes images using a YOLOv11 model for palm tree species detection and K-Means clustering for age classification. The data helps calculate carbon credits, which are later sold to industries for environmental offset and production expansion.

Freelance Projects

- Car Insurance Quotes Website Built a responsive insurance website using HTML, CSS, JavaScript, PHP, and MySQL to manage quotes, user data, and simulated payments. Hosted on a free platform with reliable database support.
- Amazon Affiliate Store Created an Amazon affiliate site using WordPress and WooCommerce, showcasing home and kitchen products with seamless Amazon redirection and responsive design to drive conversions.
- Face Recognition Entrance System Built a real-time face recognition system using Python and Flask, trained on a client-provided dataset (three students). The app recognized authorized faces via live camera feed and displayed "Pass" or "Not Recognized" through a simple web interface.

Semester Projects

- Artificial Intelligence AI Search & Problem Solving Developed a Python project that uses AI search algorithms to optimize the vertex ordering problem in Bayesian Network Learning. It enhances network structure by minimizing cost.
- Natural Language Processing Building Knowlede Graphs for Unstructured Data Developed a web app using Python and Flask that converts unstructured text into interactive knowledge graphs, showcasing skills in NLP, backend development, and data visualization.
- Natural Language Processing Feature Extraction from Text Developed a Python tool to extract readability features from text, including the Automated Readability Index (ARI), demonstrating expertise in text processing and feature extraction.

Skills

- Programming Languages: Python, C++, C, RUST
- Machine Learning and NLP: OpenCV, TensorFlow, PyTorch, NLTK, spaCy, Transformers, GPT, networkx, pyvis, pytesseract, pdf2image, beautifulsoup.
- LLMs: GPT 3.5 Turbo
- Data Analysis: Pandas, NumPy, SciPy
- Data Visualization: Matplotlib, Seaborn
- Web Development: HTML, CSS, JS, PHP, Flask
- Database Management: MySQL

- DevOps & Cloud Computing:Git, Dockers
- Soft Skills: Problem-Solving, Networking, Interpersonal Skills

Education

• B.S. in Computer Science, FAST-NUCES

2020 - 2025

- Relevant Courses: Data Structures, AI, Machine Learning

Certifications

- RUST Programming Language (Completed)
- Google Cyber Security Course (Completed)
- Technical Assistant (for Information Security course with Dr. Ali Sayyed)