

Ahmad Khalid Hussain

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Research Interests: AI and Machine Learning | Computer Vision | Natural Language Processing | Trustworthy AI

Education

Federal University Lokoja

Lokoja, Nigeria

B.Sc. in Computer Science, **CGPA: 4.75/5.00 (95%)**

2018 – 2023

Research Project: A computer-vision based system for detecting road anomalies in Nigeria.

Relevant Coursework: Structured High-Level Language Programming (A), Data Structures (A), Computer Architecture (A), Operating Systems (A), Analysis of Algorithms (A), Calculus (A), Discrete Mathematics (A), Probability and Statistics (A), Set, Logic & Algebra (A), Compiler Construction (A).

Technical Skills

Tools: HTML, CSS, Bootstrap, JavaScript, MySQL, SQL, Python, Git, Flask

Libraries: Pandas, NumPy, Matplotlib, OpenCV, Pillow, Scikit-Learn, TensorFlow, NLTK.

Research Skills: Data Wrangling, Statistical Analysis, Report Writing, Feature Engineering, Web Scraping

Research Experience

Federal University Lokoja

Oct 2022 - Sep 2023

Undergraduate Research Assistant (Project 1)

Lokoja | Onsite

- Tech used: Python, NumPy, Pandas, Scikit-Learn, Flask
- Led a team of researchers in developing a GPA-predicting system for university students
- Designed and implemented machine learning models to predict student GPAs based on various academic and non-academic factors, and the random forest performed well with an 81% accuracy.
- Coordinated team meetings and managed project timelines to ensure the successful completion of milestones.
- Presented the GPA predicting system at a university

Undergraduate Research Assistant (Project 2)

- Tech used: Python, TensorFlow, OpenCV, Scikit-Learn, Flask
- Collected and categorized road image datasets for system training and testing.
- Conducted literature research on existing road spot detection and maintenance procedures and technology.
- Utilized deep Learning algorithms to detect road faults and potholes automatically with an accuracy of 88%.

Teaching Experience

Isah Mustapha Agwai I Polytechnic

Jan 2024 - Nov 2024

Assistant Lecturer

Lafia | Onsite

- Delivered lectures and tutorials on Python programming and computer applications packages.
- Assessed and graded student assignments and projects, providing academic support and guidance.
- Participated in professional development activities to enhance teaching skills and stay updated with industry trends.

Federal University Lokoja

Mar 2019 - Jul 2023

Academic Tutor

Lokoja | Onsite

- Coached and mentored undergraduates for academic excellence.
- Prepared academic materials and organized tutorials for colleagues and other students at lower levels.

Cali Vision Academy

Feb 2021 - Sept 2022

ICT Instructor

Lokoja | Onsite

- Ensured secondary school students received fascinating and useful IT classes.
- Planned and executed a complete IT education program
- Assisted students in developing core IT skills, including software usage and basic programming principles.
- Organized and monitored practical workshops to enhance hands-on learning experiences.

Publication(s)

Khalid H.A., Faruk A., & Ismail A. Predictive Analytics for Grade Point Average (GPA) in Nigerian Tertiary Institutions: A Machine Learning Approach. *Journal of Education and Information Technologies*. **(Under Review)**.

Industrial Experience

National Youth Service Corps

Nov 2023 - Dec 2023

Data Analyst

Edo | Onsite

- Tech used: Python, Excel.
- Collected and organized data from various sources to help achieve organizational goals.
- Cleaned and verified the collected data to ensure it was accurate and reliable.
- Analyzed the data and offered practical insights to answer specific questions, aiding in better decision-making.

Excelerate

Jun 2023 - Jul 2023

Data Analyst

Dubai | Remote

- Tech used: Python, SQL, PowerBI
- Collaborated with Globalshala's Marketing team for efficient data analysis.
- Provided cost-saving recommendations to the Finance team and created persuasive presentations using data analysis and visualization.
- Utilized data insights to support recommendations and designed visually appealing presentations for Finance.

Nigerian Midstream & Downstream Petroleum Regulatory Authority

Mar 2023 - Aug 2023

Data Scientist Intern

Lokoja | Onsite

- Tech used: Python, Numpy, Pandas, Scikit-Learn
- Collaborated with the lead data scientist to conduct analysis for detecting adulteration in petrol samples.
- Gained valuable experience in the field of adulteration detection by working closely with a dedicated team.
- Enhanced skills in data analysis and contributed to improving the accuracy of petrol quality assessments.

Al-Harir Global Services, Kogi, Nigeria

Jan 2021 - Jan 2022

Frontend Developer

Lokoja | Hybrid

- Tech used: HTML, CSS, JavaScript
- Collaborated with the design team to develop user interface concepts for online apps.
- Created efficient code using HTML, CSS, and JavaScript.
- Ensured aesthetic consistency with the design team.

Projects

Quiz Web App | *HTML, CSS, JavaScript*

GitHub Repo

- Developed a quiz application that allows users to take quizzes on various topics.
- Built using JavaScript for interactivity and dynamic content, with features like score tracking.

GPA Prediction System | *Python, Pandas, NumPy, Scikit-Learn, Flask*

GitHub Repo

- Developed a machine learning model to predict student GPAs using academic data (test scores, attendance, extracurriculars).
- Applied Linear Regression, Decision Trees, and Random Forest, evaluating with RMSE and other metrics.

Road Anomaly Detection System | *Python, TensorFlow, OpenCV, Scikit-Learn, Flask*

GitHub Repo

- Built a machine learning model to detect road surface irregularities (potholes, cracks) using image data.
- Utilized CNNs for accurate real-time anomaly detection.

Library Chatbot | *Python, Pandas, NumPy, Scikit-Learn, Flask, NLTK*

GitHub Repo

- Created a chatbot for library services to assist users in answering FAQs.
- Built using Natural Language Processing (NLP) techniques for accurate, real-time user interaction.

Portfolio Webpage | *HTML, CSS, JavaScript*

GitHub Repo

- Developed a personal portfolio website using HTML, CSS, and JavaScript with a responsive design.
- Showcased projects in machine learning, data analysis, and software development.

Awards & Honors

- **Student Tutor of the Year - 2023:** Outstanding Academic Performance
- **Ayomide Ajiboye Foundation Scholarship and Mentorship Scholar (USA) – 2023**
- **Dean's Honor Award, 2020 - 2023:** Outstanding Academic Performance.
- **Department Contribution Award - 2022:** Outstanding Academic Participation.
- **Letter of Recommendation Appraisal (NMDPRA) - 2022:** Outstanding Work Performance.
- **Kogi State Bursary Scholar - 2020:** Outstanding Academic Performance.