KHAWAJA HUSSAIN AHMED

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GitHub | LinkedIn | Portfolio

EDUCATION

DEPAUW UNIVERSITY   **Aug 2021 - May 2025**
Bachelor of Arts in Computer Science, minor in Data Science & English Literature
- **Cumulative GPA**: 3.50/4.00
- **Relevant Coursework:** Data Structures & Algorithms, Object Oriented Software Development, Discrete Mathematics, Data Mining, Data Science, Data Vis. With Tableau, Artificial Intelligence, Statistics for Professionals.
- **Awards**: Kneale Scholarship, International Merit Grant, Margaret Noble Lee Debate Prize, Dean's List (6-Time Honoree).
- **Leadership**: Lead Resident Assistant, Events Coordinator MSA, Founder & VP Table Tennis Club.

EXPERIENCE

AI/ML Engineering Project Lead   **Apr 2024 – May 2024**
DePauw University
- **Enhanced** gameplay by developing an **AI Q-learning** computer opponent, contributing over **100 LOC** to an **RL** game in Python**.**
- **Lowered $75**+ in computing expenses by reducing **AI agent learning** from **12** to **6** game iterations**.**
- **Optimized** codebase maintainability by **identifying** and **fixing** bugs early, implementing **4+ unit tests** in Python using **'unittest'**.
- **Streamlined** project organization by ensuring efficient collaboration with **2 team members,** completing **6+ git** commits via **Git CLI.**

Principal Data Science Researcher   **Jan 2024 – Feb 2024**
Depauw University
- **Saved 10+ hours** of manual data processing weekly by automating QB rating analysis**,** contributing **115+ LOC** in Python.
- Facilitated **data-driven decision-making** by providing crucial analytics to coaches with **6+** performance graphs using '**matplotlib'**.
- **Slashed** feature extraction and data loading time by **5**+**hours**, utilizing **data wrangling, EDA** and **ETL** with **'pandas'** & **'numpy'**.
- **Boosted** model prediction accuracy by **15%** through **OLS regression analysis** leveraging Python's '**statsmodels'** framework, aiding **4+** coaches in making more informed decisions.

Data Analysis Research Lead   **Nov 2023 – Dec 2023**
DePauw University
- Led a **2-person** team to analyze data from **85+** universities, identifying a **25%** higher average debt for private university graduates, **influencing** policy recommendations.
- **Increased** analytical precision by **20%** with hypothesis testing in R, strengthening the case for addressing student debt disparities.
- **Reduced** data interpretation time by **30%** with **4+** visualizations employing '**ggplot2'** in **RStudio,** allowing stakeholders to quickly grasp key insights.

3D Printing Team Lead   **Jun 2023 – Aug 2023**
Tenzer Technology Centre
- **Increased** client satisfaction by **20%,** leading a **2-person** team to **optimize** 3D designs.
- **Prevented $100**+ in filament waste by developing intricate 3D **CAD** models with **95%** design accuracy.
- **Minimized delays** by **7**+**hours,** troubleshooting printing processes to ensure **on-time** project **delivery**.

Lead UI Designer & Presenter   **Nov 2022 - Dec 2022**
WiCS @ DePauw
- Pitched an **iOS** app **UI** designed in **Figma**, boosting student-career connections by **30%,** earning high user satisfaction.
- Secured **3rd** place in the hackathon achieving a **90%** assessment score, outperforming **20+** contestants.

PROJECTS

Real-Time Speech AI Assistant
- Developed a customizable AI assistant featuring role-based functionality, delivering personalized responses to users' queries.
- Leveraged LLM ollama3, assemblyAI, and ElevenLabs APIs to minimize response time substantially.

Customer Segmentation Analysis
- Conducted RFM analysis and K-means clustering to online retail data, optimizing targeted marketing strategies aimed at increasing customer retention and engagement.

SKILLS & EXPERTISE

Technical Skills
- **Programming Languages**: Python, R, C++, Java, Swift, assembly, C#, SQL.
- **Technologies/Frameworks**: git/GitHub, Markdown, Linux/Bash Scripting, Tableau, Figma, Unity Hub, Cura, Visual Studio, CAD, numpy, matplotlib, statsmodels, assemblyai, openai-whisper, elevenlabs, ollama/llama3, Excel, Google Sheets, SQLite, Java API, SwiftUI, RStudio.
- **Languages**: Fluent in English, Urdu and Punjabi; Elementary proficiency in Arabic.