# 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, 3D Game Development, 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: Reinforcement Learning Game

Apr 2024 - May 2024

DePauw University

- Developed a Python command-line game, contributing over 100 LOC.
- Integrating **Q-learning** to optimize computer's strategy, achieving substantial **AI agent learning** within **6** game iterations.
- Implemented 4+ unit tests in Python using 'unittest', improving software reliability and codebase maintainability.
- Completed 6+ git commits via Git CLI, ensuring version control and streamlining project organization.

### Principal Data Science Researcher: NFL QB Ratings Analysis

Jan 2024 – Feb 2024

Depauw University

- Contributed 115+ LOC in Python, automating QB rating analysis and significantly decreasing manual effort by 80%.
- Performed data wrangling and EDA, visualizing 6+ graphs leveraging matplotlib.
- Implemented ETL techniques, slashing feature extraction and data loading time by 40%.
- Conducted **OLS** regression analysis utilizing **statsmodel**, boosting model clarity and prediction accuracy by **15%**.

# Data Analysis Research Lead: <u>Statistical Analysis of University Debt Disparities</u>

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 and enhancing stakeholder understanding by **18%**.
- Conducted a two-sample t-test using **R** to compare graduate debt, **boosting analytical precision** by 20%.
- Created 4+ visualizations employing ggplot2 in RStudio, decreasing data interpretation time by 30%.

## **3D Printing Team Lead**

Jun 2023 – Aug 2023

Tenzer Technology Centre

- Led a **2-person** team to **optimize** 3D designs, increasing client satisfaction by **20%**.
- Developed intricate 3D CAD models with 95% design accuracy, significantly improving product visualization and reducing material waste by 15%.
- Troubleshot issues in 3D models and printing processes, minimizing delays by 25% ensuring on-time project delivery.

## Lead UI Designer & Presenter

Nov 2022 - Dec 2022

WiCS @ DePauw

- Pitched an iOS app UI designed with Figma, boosting student-career connections by 30%.
- Secured 3rd place in the hackathon, outperforming 20+ contestants with a 90% assessment score.

## **PROJECTS**

### **Real-Time Speech AI Assistant**

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

## **Customer Segmentation Analysis**

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## **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.