Hamed Abdul Baseer

(309) 323-1188 | hamedabdulbaseer@mail.bradley.edu | linkedin.com/in/hamed-abdul-baseer

Education

Bradley University
Master of Science in Computer Science; GPA: 3.83/4.0 — *Jan 2025 – Dec 2026 (Expected)*

Osmania University
Bachelor of Civil Engineering; GPA: 3.1/4.0 — *Aug 2020 – Jul 2024*

Key Projects

Data Warehouse Analytics Project | *MySQL, SQL, ETL, Dimensional Modeling* 2025

- Designed and implemented a **layered data warehouse architecture** using **Bronze, Silver, and Gold** patterns with a **star schema** (fact and dimension tables) to support scalable business analytics.
- Engineered end-to-end **ETL pipelines** to ingest, cleanse, and transform raw operational data into analytics-ready structures with defined **grain** and **surrogate keys**.
- Developed optimized analytical SQL queries using **joins, CTEs, aggregations, and indexing strategies** to enable efficient reporting and performance analysis.

LLM-Based Tweet Sentiment Evaluation Framework | *Prompt Engineering, NLP* 2025

- Built an evaluation pipeline to benchmark multiple **large language models** for tweet-level sentiment classification.
- Applied **fine-tuning via model APIs** and designed **zero-shot, one-shot, and few-shot prompting** strategies to adapt general-purpose LLMs for sentiment analysis tasks.
- Performed **quantitative and qualitative error analysis** to identify failure patterns such as negation, mixed sentiment, mixed tone, and slang.

Work Experience

Data Science Intern — May 2023 – Jun 2023
Delta Sigma Technologies (with Cephei Consultants) — *Remote*

- Completed a project-based data science internship involving data cleaning, exploratory analysis, and applied machine learning tasks in a collaborative team environment.

Research Assistant – Machine Learning — Jun 2025 – Dec 2025
Bradley University, Department of Computer Science — *Peoria, IL*

- Built and optimized regression models in **Python** on real-world experimental data, achieving an optimized $\mathbf{R^2}$ **score of 0.83**.
- Performed **feature engineering**, **hyperparameter tuning**, and model evaluation to identify key performance drivers.
- Designed a **Flask-based interactive application** and co-authored a peer-reviewed publication on ML-based material strength prediction.

Graduate Assistant / Junior AI Engineer — Jan 2026 – Present
*Bradley University in collaboration with **OSF Healthcare System*** — *Peoria, IL*

- Contributing to an enterprise healthcare intelligence platform, developing applied AI and analytics solutions for real-world decision support.
- Designed and evaluated **LLM-based solutions**, including **fine-tuning** and **Retrieval-Augmented Generation (RAG)** architectures using embedding-based retrieval.
- Collaborated with stakeholders to translate service workflows into scalable AI components while applying **responsible AI practices** in regulated environments.

Technical Skills

Programming: Python, SQL, JavaScript
Data Engineering: ETL Pipelines, Data Integration, Star Schema Modeling, Data Warehousing (Bronze/Silver/Gold), SQL Optimization
Machine Learning: Regression, Feature Engineering, Model Evaluation, LLM Fine-Tuning
Databases: MySQL, SQL Server
Libraries/Frameworks: pandas, NumPy, Scikit-learn, Flask, LangChain, Transformers
Tools & Systems: Linux, REST APIs, Power BI, VS Code, PyCharm, Jupyter