Bobby Dhir

bdhir@unomaha.edu — (531) 232-1657 — Omaha, NE — LinkedIn — GitHub — Portfolio

Skills

Genrative AI: AI Agents, Prompt Engineering, RAG
Gen AI Models familiarity: ChatGPT (4/4o/o1), Claude, Gemini, Perplexity (env), Copilot
Statistical Methods: Cross-validation, correlation analysis, ROC–AUC, confusion matrix metrics
ML algorithms: Logistic Regression, Random Forest, SVM, K-Means clustering, Feedforward NNs
ML frameworks: Scikit-learn, TensorFlow, PyTorch, Keras
Data Science libraries: Pandas, NumPy, Matplotlib, Seaborn
Version Control: Git, GitHub
Cloud Platforms: Google Cloud, OpenAI
Programming: Python, C, Java, C#

Work Experience

AI/ML Assistant — CMIT Attic, University of Nebraska at Omaha (UNO) May 2025 – Present
- **Project**: Evaluating fairness in **health risk prediction** ML models by identifying **disparities across sensitive features**
- Evaluated and benchmarked multiple ML models against my implementations for **predicting 30-day hospital readmissions** using metrics(accuracy, recall, precision) while evaluating disparities
- Implemented **SMOTE resampling** to balance patient data, improving performance and unbiased prediction outcomes
- Boosted recall for minority class detection to ∼76–80% while sustaining high precision (∼95%) and balanced F1-scores (∼0.80) across multiple ML models.
- Tech stack: Python, Jupyter, Scikit-learn, TensorFlow, Matplotlib, NumPy, Random Forest, SVM, XGBoost

Generative AI Supervisor — CMIT Attic, UNO June 2025 – July 2025
- Project: Developed an AI agent for university course scheduling, recommending optimal schedules, resolving conflicts, and syncing with personal calendars
- Led and supervised two high school interns in developing **AI-agents**
- Developed and deployed **two AI agents** in a production environment using **Model Context Protocol (MCP)** for robust **multi-agent interaction** with OpenAI APIs
- Implemented coding best practices (modularization, version control, error handling) to enhance code quality and maintainability
- Tech stack: Python, Pandas, Streamlit, OpenAI APIs, Google APIs, RAG, AI agents, MLOps, CSV, Data Scraping

Generative AI Student Worker — Bioinformatics Lab, UNO Oct 2025 – Present
- Developing an **AI agent for gene mutation analysis and interpretation**, designed to assist researchers in identifying and understanding genetic variants
- Aiming to automate genomic reasoning and support future bioinformatics research applications

Teaching Assistant / Grader — UNO Aug 2025 – Present
- Graded assignments and provided detailed feedback to strengthen coding and problem-solving skills
- Led office hours and supported faculty with coursework logistics to enhance learning and efficiency

Instructor/Assistant — UNO iSTEM After-School Program June 2025 – Present
- Teaching AI/ML and robotics through engaging hands-on lessons
- Encouraging STEM engagement by mentoring students on exploratory projects to enhance confidence

Education

University of Nebraska at Omaha Aug 2024 – May 2028 (Expected)
Program: BS in Computer Science