Will Maberry

maberrywill@gmail.com | will-maberry | willmaberry.com | 972.837.9008

EDUCATION

The University of Texas at Arlington (UTA) Aug. 2022 - May 2026
B.S. in Computer Science *GPA*: 3.8+ (Cumulative)

Leadership Roles
Education Director for the Association of Computing Machinery (ACM) — HackUTA 7 (2025) Experience Officer
The Wesley Board of Directors' student representative and lead team member

TECHNICAL SKILLS

Programming Languages: Python, C, Java, Elm
Machine Learning: TensorFlow, Keras, PyTorch, NumPy, Pandas, OpenCV, MediaPipe
Development Tools: FastAPI, Postman, OAuth2, Matplotlib, GDB, GNU Bash, Apache Maven, JUnit
Database Tools: SQLite, MySQL, MongoDB, SQLAlchemy
Web and Markup: HTML, CSS, LaTeX
Environments and Platforms: Windows, Ubuntu, Docker, VirtualBox, VS Code, Jupyter

WORK EXPERIENCE

USDA Research Assistant – Predictive Modeling (HPAI) May 2025 – Present
- Collaborate with Dr. Jianzhong Su, Dr. Amanda Ashworth, and Dr. Joshua Blackstock to model the spread of **highly pathogenic avian influenza (HPAI)** across the continental U.S.
- Develop a **neural network model** to detect and forecast HPAI at the **county-month level** using agricultural, geospatial, and temporal features.

OpenAI Engagement Manager Jul. 2024 - Present
- Develop and execute engagement initiatives for **120,000+ OpenAI users** worldwide, including conducting interviews, organizing events, and creating newsletters.
- Analyze KPIs and gather community feedback to optimize engagement strategies, resulting in a **120+% increase in engagement in the first six months**.
- Actively **gather and analyze user feedback** to identify feature requests and areas for improvement, ensuring OpenAI's engagement strategies align with user needs and expectations.

OpenAI Community Volunteer Sep. 2022 - Jul. 2024

CSE 3320 Operating Systems Teaching Assistant Jan 2025 - May 2025
- Help instruct **120 students** in understanding key operating systems principles such as: deadlocks, job scheduling algorithms, process synchronization, and file system management.
- **2nd-ever undergraduate teaching assistant in 14 years**, and personally recommended.
- Aid students in the **hands-on development** of operating system principles, such as shell creation, multi-threading, and custom memory allocation ('malloc').

PROJECTS

American Sign Language (ASL) Detector in Python
- Created a dataset with OpenCV and MediaPipe, collecting **2000+ ASL samples** to train a neural network model.
- Built the model using TensorFlow, achieving **90+% accuracy** in detecting ASL letters from live video.
- Incorporated multi-threading to run video, predictions, and Text-to-Speech in parallel, ensuring real-time interpretation.

MNIST Neural Network Walkthrough in Python
- Coded a neural network from scratch, highlighting core concepts like **forward passes and gradient descent**.
- Achieved **over 95% accuracy** on the MNIST dataset, demonstrating effective classification of handwritten digits.
- Viewed key concepts such as weight updates, loss reduction, and performance metrics using Matplotlib.

Algorithm Learning Platform in Elm
- Built a **user-friendly educational platform** to visualize commonly taught algorithms and data structures.
- **Actively used by UT-Arlington faculty** in lectures to enhance teaching and improve student comprehension.
- Visualized **23 algorithms and data structures** for dynamic, step-by-step walkthroughs.