Will Maberry

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EDUCATION

The University of Texas at Arlington (UTA) Aug. 2022 - May 2026
B.S. in Computer Science *GPA*: 3.8+ (4x Dean's List)

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

Languages: Python, C, Java, Scala, Elm, JavaScript
ML / AI: TensorFlow, Keras, PyTorch, NumPy, Pandas
Full-Stack: FastAPI, Flask, Pydantic, Postman
Software Tools: Maven, GDB, JUnit, GitHub Actions
Databases: SQLite, MySQL, MongoDB, SQLAlchemy
Visualization: Matplotlib, Seaborn, Folium, Dash, Leaflet
Platforms: Windows, Ubuntu, Docker, Heroku, Koyeb
Web / Markup: HTML, CSS, LaTeX, Jinja2, Canvas

WORK EXPERIENCE

OpenAI Engagement Manager — Jul. 2024 - Present

- Curating engagement strategy for OpenAI's largest public-facing user community, supporting **135,000+ global users** through interactive initiatives, educational events, and newsletters.
- Analyzing engagement metrics and user sentiment to refine programming and support product alignment, contributing to a **120%+ increase in engagement** within six months.

OpenAI Community Volunteer — Sep. 2022 - Jul. 2024

USDA ARS AI/ML Researcher — Jul. 2025 - Present

- Continuing research to transform HPAI outbreak modeling into a public-facing platform for early risk forecasting.
- Designing an interactive geospatial application to **visualize county-level HPAI risk** up to one month in advance, with real-time user location awareness and personalized insights.
- Developing a **fully automated pipeline** to integrate live environmental and climate data, retrain forecasting models, and continuously deploy updated risk projections without manual intervention.
- Translating prior research into accessible tools that support outbreak prevention, rapid response, and **data-informed decision-making** for producers, analysts, and national biosurveillance teams.

USDA ARS AI/ML Research Internship — May 2025 – Jul. 2025

- Led development of machine learning models to detect and forecast Highly Pathogenic Avian Influenza (HPAI), in partnership with **USDA national program and research leaders**.
- Built and tuned **classification and forecasting ensembles** using imbalanced-learning and gradient boosting, achieving **80%+ balanced accuracy** on national-scale data.
- Designed a **rolling monthly forecast system** for proactive, county-level HPAI risk prediction.
- Communicated results to cross-disciplinary USDA teams, supporting **evidence-based strategies** for disease surveillance and prevention.
- Performed geospatial preprocessing, threshold tuning, and model analysis within **modular Python workflows**.

CSE 3320 Operating Systems Teaching Assistant — Jan 2025 - May 2025

- Instructed **120 students** in key OS concepts including deadlocks, job scheduling, and memory management.
- Selected as **2nd-ever undergraduate TA in 14 years**, personally recommended by faculty.
- Guided students through hands-on projects including **shell creation, multithreading**, and custom `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.
- Assembled the model using TensorFlow, achieving **90+% accuracy** in detecting ASL letters from live video.
- Implemented multi-threading to run video, predictions, and Text-to-Speech in parallel, ensuring real-time interpretation.

Algorithm Learning Platform in Elm

- Designed 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** with interactive, step-by-step animations covering sorting, searching, tree and graph traversals, heap operations, and more.