

Travis A. Wessman Jr.

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Attleboro, MA

EDUCATION

- **University of Massachusetts Dartmouth** North Dartmouth, MA
• *Bachelor of Science - Computer Science (Artificial Intelligence Concentration); GPA: 3.8* *Expected May 2028*
• *Relevant Courses: Operating Systems, Object Oriented Programming, C Programming, Computing Systems*

SKILLS SUMMARY

- **Python:** 2 years of hands-on experience; comfortable with scripting, automation, and data processing tasks
- **NLP & AI:** LLMs, RAG pipelines, LangChain; hands-on with FAISS vector search for similarity-based retrieval
- **Data Processing:** NumPy, web scraping, data parsing, PyPDF; working knowledge of Pandas and ETL concepts
- **Database:** Confident in SQL and SQLite; experience writing real queries and working with structured data
- **Tools:** Git, Visual Studio Code, Firebase, Streamlit, Databricks, MLflow, MATLAB, Simulink, API integration
- **Platforms:** Windows, Mac OSX

PROJECTS

- **The Bam Ghost Protocol — AUV Simulation — MATLAB, Simulink:** Built and presented an autonomous underwater vehicle (AUV) simulation for detecting ghost gear (lost and abandoned fishing equipment) during a 3-day Blue Tech externship. Developed the simulation in MATLAB and Simulink with mentorship from the MathWorks team, and pitched the system to industry judges. **Award: 1st Place — Courage Builder x UMass Dartmouth Blue Tech Externship.** (Mar 2026)
- **RAG Paper Analysis System — Python, LangChain, FAISS, PyPDF, NumPy:** Independently developed an end-to-end RAG pipeline for document analysis. Built a data ingestion pipeline extracting text and metadata from PDFs using PyPDF, implemented document chunking and embeddings for semantic search, and constructed a FAISS vector index for similarity-based retrieval with natural language querying over a document corpus. (Nov 2025)
- **NutriGrove - Automated Data Collection — Python, Firebase, APIs:** Co-developed an automated system aggregating dining and nutritional data from multiple university sources into a centralized cloud database. Personally responsible for Firebase cloud infrastructure, Python web scraping, and AI-driven recommendation logic. Built a recommendation algorithm applying predictive modeling for personalized nutritional insights. **Award: 2nd Place - Best Use of AI to Validate User Interest, YCONIC 2025 Hackathon.** (Jan 2025)

EXPERIENCE

- **New Bedford Research & Robotics (NBRR) × Sedna** New Bedford, MA
• *Software Engineering Intern — Courage Builder Blue Tech Pathways* *Jun 2026 - Aug 2026*
 - **Bathymetry Anomaly Detection:** Building a geospatial data pipeline that fuses NOAA ENC/BAG charts, Teledyne multibeam surveys, and live single-beam sonar from an autonomous surface vehicle (ASV) to detect and flag changes on the seafloor.
 - **Geospatial Comparison Engine:** Developing depth-comparison tooling in Python with rasterio, including bilinear interpolation for off-grid depth lookups and NOAA-vs-survey deviation maps across multiple coordinate reference systems (WGS84, projected CRS).
 - **Tidal Reduction & Anomaly Detection:** Correcting sonar readings to the MLLW datum via the NOAA CO-OPS tidal API, then applying statistical and spatial anomaly detection (Z-score, DBSCAN, Isolation Forest) with multi-pass confidence tiering.
- **University of Massachusetts Dartmouth** North Dartmouth, MA
• *Student IT Technician* *Oct 2024 - Present*
 - **Technical Support:** Diagnose and resolve technical issues for members of a large university community. Apply systematic troubleshooting and strong follow-up to ensure effective resolution.
 - **Systems & Documentation:** Support enterprise software across Windows and Apple platforms. Create clear technical documentation and assist with software deployment and telecommunications tasks.
 - **Hardware & Device Setup:** Configure and deploy workstations, laptops, and peripheral devices for university staff and students. Perform hardware troubleshooting, component setup, and device imaging as needed.
- **Bristol County Savings Bank** Attleboro, MA
• *Bank Teller Intern* *Sep 2023 - May 2024*
 - **Banking Operations:** Processed customer deposits, withdrawals, and account inquiries accurately in a regulated banking environment; completed training in banking compliance, fraud awareness, and safety procedures.

HONORS AND AWARDS

- 1st Place - Courage Builder + UMass Dartmouth Blue Tech Externship Program (Mar 2026)
- 2nd Place - Best Use of AI to Validate User Interest, YCONIC 2025 AI+Startup Hackathon (Jan 2025)

INTERESTS

Large Language Models, Natural Language Processing, AI Chatbots, RAG Systems, Data Science, Machine Learning.