

## **ERIC HOLT**

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## **PROFESSIONAL SUMMARY**

Software and AI developer with hands-on experience building LLM applications, RAG pipelines, reinforcement learning agents, and full-stack web applications. Strong background in diagnostics and embedded systems from seven years supporting emergency vehicle platforms. Skilled in Python, JavaScript, machine learning workflows, and modern development tools.

## **TECHNICAL SKILLS**

Programming: Python (PCEP Certified), JavaScript, HTML/CSS

AI/ML Frameworks: PyTorch, TensorFlow, Transformers, Scikit-Learn

Data Tools: NumPy, Pandas

ML Concepts: RAG, LLM fine-tuning, reinforcement learning, model evaluation

Web Development: React, Flask, REST APIs

Tools: Git, VS Code, Jupyter, PlatformIO

Embedded & Systems: CAN bus, PLC basics, IoT/Embedded Diagnostics

## **EDUCATION**

DeVry University – Bachelor of Science in Computer Information Systems (Expected 2028)

Specialization: Programming, Machine Learning & Design Technology

## **CERTIFICATIONS & ACCOMPLISHMENTS**

PCEP – Certified Entry-Level Python Programmer, 2025

Dean's List, DeVry University, 2025

Web Scraping with Python, DeVry University, 2025

Vibe Coding with AI, DeVry University, 2025

National Society of Leadership and Success – Inducted Member

## **TECHNICAL PROJECTS**

### **Transport LLM-WebGPU (React, Python, RAG, Local Corpus)**

- Developed a fully client-side LLM accelerated with WebGPU, enabling on-device inference with zero server dependency.
- Implemented vector search, embeddings, and prompt-augmentation for a custom RAG pipeline.

- Built React interface controlling weight loading, retrieval visualization, and model inference.

### **Reinforcement Learning Warehouse Bot (Python, PyTorch, Gymnasium)**

- Designed and trained a reinforcement learning agent for warehouse navigation and pick-and-place optimization.
- Implemented custom reward shaping and DQN/PPO training loops.
- Improved simulated route efficiency and reduced idle movement through iterative policy tuning.

### **Flask Chatbot Web App (Python, Flask, Render)**

- Built and deployed a full-stack chatbot application hosted 24/7 on Render.
- Integrated GitHub deployment workflows and resolved runtime and routing issues.
- Demonstrated production deployment and web app troubleshooting skills.

### **Weather Web App (Python, Flask, Bootstrap, Chart.js)**

- Developed a responsive weather dashboard delivering real-time and forecast data.
- Implemented chart visualizations, search history, and error handling.
- Deployed continuously on Render for live public access.

### **Image Classifier Web App (JavaScript, TensorFlow.js)**

- Built a browser-based image classifier running entirely on the client.
- Created an interactive UI and deployed for 24/7 availability.
- Demonstrated understanding of ML inference in web environments.

## **EXPERIENCE**

### **Technical Diagnostics & Systems Specialist – Emergency Vehicle Platforms (2017-2024)**

City of Coppell • City of Grapevine • Siddons-Martin Emergency Group

- Performed advanced diagnostics on CAN bus, PLC, and embedded control systems for emergency vehicles.
- Identified system-level failures, interpreted wiring diagrams, and documented resolutions.
- Collaborated with engineering teams to address firmware, electrical, and mechanical issues.
- Trained operators and technicians on troubleshooting procedures and system functionality.