ERIC HOLT

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Portfolio: https://ericholt.dev

PROFESSIONAL SUMMARY

Driven programmer specializing in software development and data-centric solutions, with a strong focus on artificial intelligence and machine learning. Proficient in Python and experienced in building data-driven applications, automation systems, and analytical models. Known for rapid learning, problem-solving, and a dedication to creating scalable, intelligent software that bridges data and innovation.

TECHNICAL SKILLS

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

ML & Data Libraries: TensorFlow, Transformers, PyTorch, scikit-learn, NumPy, Pandas

Data Visualization: Matplotlib, Chart.js

Web & Development Tools: Flask, Git, VS Code, Jupyter, PlatformIO

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

ML Techniques & Concepts: Retrieval-Augmented Generation (RAG), model fine-tuning, supervised learning, reinforced learning (Q-learning), model evaluation

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EDUCATION

DeVry University – *Bachelor of Science in Computer* Information *Systems* (Expected 2028)
Specialization: Programming, Machine Learning & Design Technology
Relevant Coursework: Technology, Data Structures & Programming

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CERTIFICATIONS & ACCOMPLISHMENTS

- PCEP – Certified Entry-Level Python Programmer, Python Institute, 2025
- Dean's List, DeVry University, 2025
- Web Scraping with Python, DeVry University, 2025
- Vibe Coding with AI, DeVry University, 2025

TECHNICAL PROJECTS

Transport LLM-WebGPU (React, Python, RAG, Local Corpus) - *Live Demo* | *GitHub*

- Built a domain-focused RAG system using a curated transportation corpus with in-browser context retrieval and prompt augmentation.
- Deployed a fully client-side LLM running on WebGPU (no server or API), demonstrating on-device inference and privacy-preserving AI.

Reinforced Learning Warehouse Bot (Python, PyTorch, Gymnasium) **-** *Live Demo* | *GitHub*

- Developed and trained a reinforcement learning agent to optimize warehouse navigation and pick-and-place operations in a simulated environment.
- Designed custom reward functions and implemented DQN/PPO algorithms using Gymnasium for efficient route planning and reduced idle time.

Flask Chatbot Web App (Python, Flask, Render Deployment) **-** *Live Demo* | *GitHub*

- Built and deployed a Flask chatbot web app with GitHub integration and cloud hosting live, 24/7 on Render.
- Troubleshot deployment errors and optimized routing, showcasing skills in web dev and cloud deployment.

Weather Web App (Python, Flask, Bootstrap, Chart.js) **-** *Live Demo* | *GitHub*

- Developed a Flask web app delivering real-time weather data and multi-day forecasts with user-friendly visualizations live, 24/7 on Render.
- Integrated Bootstrap for responsive design, Chart.js for interactive charts, and implemented search history with error handling.

Image Classifier Web App (JavaScript, TensorFlow.js, HTML/CSS) - *Live Demo* | *GitHub*

- Developed a browser-based image classifier using TensorFlow.js, enabling real-time predictions directly in the client without server-side processing.
- Built an interactive web interface with HTML/CSS and deployed it on Render for live, 24/7 availability.

EXPERIENCE

City of Coppell – Emergency Vehicle Technician (Feb 2024 – Dec 2024)

City of Grapevine – Master Mechanic / Fire Apparatus (Jul 2022 – Feb 2024)

Siddons-Martin Emergency Group – Field Service Technician (Jan 2017 – May 2022)