# ERIC HOLT

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Portfolio: https://ericholt.dev

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## 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.

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## 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** (Python, RAG, Local Corpus, Vector Search) - *Live Demo* | *GitHub*

- Designed and implemented a retrieval-augmented generation (RAG) system trained on transportation data using local embeddings and in-browser vector search.
- Building modular components for data ingestion, retrieval, and prompt augmentation to enable context-aware conversational AI performance.

**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)