Vaughn **Whitwell-Stier**

Junior Software Developer

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Education

Red River College

Winnipeg, MB

Diploma in Full Stack Web Development

September 2024 – March 2026

GPA: 4.5

Skills

Tools and Frameworks:

HTML, React, CSS, JavaScript, Python, Java, PostgreSQL, Docker, Git, AWS, Vercel, Oauth, Supabase, N8N, Ollama

Experience

Rotor Village Inc

Winkler, MB

Unmanned Aerial System Product Developer

2023 – Present

- Researched and developed low-cost small Unmanned Aerial system platforms, reducing per-unit costs by 30% while maintaining 95%+ flight performance reliability
- Led systematic debugging of autopilot, power distribution, propulsion, and RF systems. Decreasing flight platform failures by 65%
- Fulfilled fixed-price contracts for custom flight platforms, with an average of 10% cost saving per contract

Technical Customer Service Rep.

2021-2023

- Diagnosed drone hardware and software issues across autopilot, power delivery, GPS, telemetry systems, achieving over 85% first-contact resolution rate
- Translated technical setup procedures and wiring schematics for customers ranging from hobbyists to commercial operators, reducing related support tickets by 15% through visual guides and written instructions
- Automated repetitive e-commerce workflows including product description formatting, payroll/wage tracking, PDF-to-CSV conversion, eliminating 5 hours of manual work weekly and reducing product listing errors by 90%.
- Developed standardized response templates and diagnostic workflows for common hardware failures and logistics issues, enabling instant resolution of 15% of support tickets

Projects

Autonomous AI DevOps Hub

React, Docker, MCP, AI/ML, N8N, Bash

- Engineered portable AI-powered development platform on Raspberry Pi 4 with 8 containerized services, custom React dashboard, and 10-hour autonomous battery operation
- Implemented Model Context Protocol (MCP) server enabling seamless workflow automation and AI-driven system administration across environments, including context-aware troubleshooting, Docker Orchestration, and direct code injection
- Developed monitoring system using N8N and Claude (or Local AI) that performs 5-minute health checks on Docker containers, system resources, and networking, diagnosing issues, requesting user approval, and implementing solutions
- Created intelligent documentation pipeline with N8N workflows and local Qwen2.5 model, saving over 2 hours per execution through automated code review and knowledge base generation

Interactive AI Ethics Learning Platform

eduaitools.ca

React, REST, Vercel, Supabase, OAuth, Openrouter, IndexTTS2

- React-based AI educational platform with OAuth authentication, Supabase backend, and OpenRouter API integration for teaching ethical AI usage to students and educators
- Developed 6 tutorial videos with AI-generated voiceovers using IndexTTS2, covering LLM best practices and ethical AI implementation
- Built interactive tools for email assistance, note summarization, and test question generation using the Llama 4 Maverick model
- Implemented user analytics to track engagement with tutorials and AI tools, storing data in Supabase database

Long-Range Multi-Frequency Drone Command System

- Designed and built portable ground control station with dual monitors, integrating WinTAK, QGC, and Mission Planner software on Windows-based i3 system
- Engineered self-powered 16-foot multi-frequency antenna array (915MHz, 1.3GHz, 2.4GHz, 5.8GHz) with dual connectivity options (Bluetooth/RJ45)
- Achieved extended operational range of 185km with antenna integration and 60km standalone capability through optimized RF design