Shawn Adrian

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WORK EXPERIENCE

Software Developer | Affinity RCM (*Harris Computer*) – *Ottawa, ON* Jul. 2024 – May. 2025

- Developed robust backend services using C#/.NET, focusing on system reliability and data integrity for high-volume hospital systems, integrating SQL Server queries into API logic.
- Designed scalable frontend interfaces with React.js and Material-UI to visualize large-scale patient service metrics, optimizing system response and operational efficiency for end-users across different departments.
- Optimized automated CI/CD pipelines (Jenkins), integrating unit testing protocols to streamline deployment cycles.

Software Developer Intern | Harris Novum (*Harris Computer*) – *Ottawa, ON* May. 2022 – Jun. 2024

- Engineered a data monitoring dashboard (React, MUI) to streamline complex hospital billing workflows, improving data retrieval processes and reducing critical reporting time by 30%.
- Built a secure *'Pay as Guest'* transaction module, handling 1,200+ monthly operations and driving an 18% increase in patient payment completion rates.
- Led the company's rebrand initiative and launched a new website in Webflow, saving over $14k USD.

Computer Engineering Intern | *Tech. Services* @ Memorial University – *St. John's, NL* Sep. 2023 – Dec. 2023

- Architected a data management system with SQLite and Python (Flask) to track critical lab safety equipment, consolidating 20,000+ scattered records and ensuring compliance with university safety standards.
- Managed technical infrastructure and procurement for different departments, performing diagnostics and repairs on user and research workstations to minimize downtime.
- Led rapid prototyping initiatives using 3D printing to design and fabricate equipment, streamlining lab operations.

Research and Development Intern | Genoa Design International – *Mt. Pearl, NL* Jan. 2021 – Apr. 2021

- Transformed ShipConstructor CAD models into optimized, high-performance 3D assets with Blender to ensure smooth performance and improve user interaction.
- Spearheaded the design of an immersive Mixed Reality app for the HoloLens 2, transforming the user experience in ship CAD design training by providing interactive visualisations.
- Utilized Unity to create an engaging MR experience and simplify complex shipbuilding concepts for users.

PROJECTS

Kilick-1 Cube Satellite

- Designed the Payload Finite State Machine to manage mission critical lifecycle events, including power sequencing for the MAX GNSS chip and configuration of the Spartan FPGA.
- Implemented an iterative calibration routine to generate mock Delay Doppler Maps (DDMs), utilizing matrix algorithms to optimize signal reception parameters for precise sea-ice reflectometry.
- Developed embedded **C** drivers (SPI/I2C) for the payload subsystem, managing real-time data flow between the central control unit and peripherals sensors.

Docker Network IoT Stack

- Architected a containerized IoT network stack, with a shell script to automate deployment of containerized apps such as Pi-hole, Unbound (DNS resolver), CouchDb to sync Obsidian notes, and NGinx to personal domains.
- Optimized a 32-bit Raspberry Pi 2B environment by implementing strict logging drivers and Log2RAM to minimize SD card wear, ensuring long-term system stability and performance within a 1GB RAM constraint.
- Maintained a VitePress docsite to facilitate open-source reproducibility and scalability for low-resource hardware users.

EDUCATION

Memorial University of Newfoundland and Labrador *St. John's, NL*
B.Eng. in Computer Engineering Class of 2024

- **Core Competencies:** Real-Time Operating Systems; Digital Signal Processing; Communication Networks; Computer Security; Computer Architecture; Concurrent Programming; Microprocessors

Languages & Tools: C | C# | Python | JavaScript| Java | SQL | Git | Jenkins | Postman | Unity | Docker | Vue | React
Hardware & Frameworks: Linux/Unix | Raspberry Pi | Microcontrollers | 3D Printing & CAD