Jordan Carlson

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Engineering Project Manager

An outcome-driven embedded device project manager with inventive development strategies seeking work that combines business fortification goals with disciplined engineering strategies.

Areas of Expertise

- Agile project coordination
- Streamlining objectives and scopes
- Delegating risk and blocker controls
- Modularizing budgets and timelines
- Applying design specifications
- Client and stakeholder communication
- Integrating tasks with documentation
- Embedded systems design
- Hardware-software optimization
- System debugging and testing

Education

- **B.Eng** – Co-op Electrical Engineering - Graduated 2022 University of Victoria
- **PMP Certification** - Qualified Approval Project Management Institute

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Work Experience

Lead Embedded Software Developer – Salyx Medical 2021-2025

- Led a long-term compact vital signs monitoring system development team to achieve proof-of-concept for medical-grade accuracies through state-of-the-art hardware application and novel medical research implementation.
- Managed projects with Agile methodology using Git with GitLab, Jira and Confluence.
- Directed utilizing data processing and visualization to validate and improve the grade of measurement certainties for accurate advertising and to prepare for clinical test trials.
- Prioritized debugging for C, C++, and open-source EDA embedded systems for the optimization of memory, processing speed, power, sensitive sensor integration, and feature extraction for machine learning.

Software Systems and Test Engineer – Carmanah Technologies 2022-2023

- Managed testing for embedded software systems for a safety-critical crosswalk system MVP. This revision of Carmanah's primary product generated $1.6 million in revenue for 2023 and continues to be distributed with all systems operative.
- Created and implemented efficient troubleshooting tactics with three embedded software developers, two product design managers, two hardware specialists and a cloud maintainer.
- Collaborated to refine product requirement specifications and develop test strategies for the integrated software infrastructures.
- Created and updated documentation in Confluence with Jira and managed and updated software and firmware repositories.

- Led the creation, testing, and optimization of Python applications to automatically set permanent ROM values during MVP manufacturing.
- Designed and developed a solar crosswalk system simulation with a measurement and automation device system (with LabJack and Python) to examine long-term, continual system behaviours.
- Headed testing system stability and reliability assurance by producing complex unit-testing algorithms for large firmware datasets.
- Structured debugging for app-controlled Bluetooth, OpenThread and Losant MQTT IoT embedded networks, including for firmware updates.
- Instantiated full-system quality assurance utilizing Python scripting to continuously program an RS-232 power source with Tera Term serial communication for automated, documented tests.

Embedded Software Developer – Ergonomyx Technologies Inc. 2020-2022

- Managed feature development for IoT devices from MVP completion to several production waves, verifying product stability reliability and generating $1 million in revenue.
- Wrote approved grant applications from applied development processes.
- Granted a patent for the Ergonomyx smart workplace fitness ecosystem.
- Developed tests for UL safety inspection and certification.
- Integrated Bluetooth, Wi-Fi, MQTT, AWS IoT Core cloud connectivity, and the proprietary Ergonomyx API's over-the-air firmware updates feature with RTOS.

Lead Hand – Precision Well Servicing 2015-2018

- Led five-person crews to complete physically demanding, technical operation procedures.
- Coordinated the team throughout extensive days and nights, optimizing production time while advancing safety protocols and fortifying positive attitudes within the team.
- Serviced new wells, often daily, that each produce an average of $1 million daily revenue.

Technical Management Specialties

- Implementing word processing and spreadsheets in Microsoft Office and Google Suite.
- Coordinating workflows and documentation (mostly using Atlassian, Agile with Jira, Confluence, and Kanban linking).
- Managing Git Version Control (with Gitlab, Bitbucket, Gitkraken, Sourcetree, and CLI).
- Networking IoT (with AWS IoT Core and Losant Node , C/C++ and PostgreSQL backend).
- Optimizing data collection procedures, transferring data with various input protocols (such as JSON strings, type-packed bytes, and firmware protocols such as i^2C, UART, and SPI).
- Managing data processing (using Pandas, numPy, sciPy, Keras, and SciKit-Learn) with visualization for intuitive analysis (using Matplotlib and MATLAB).
- Defining and delegating requirement specifications for object-oriented (such as Python, C++, Java and JavaScript) and low-level (such as ARM and Tensilica, assembly and register level) programming infrastructures.

Personal Interest

- **Independent Projects:** Implementing prospective hardware, SoCs, and software frameworks.
- **UVic Rocketry Club:** Managing designs and engineering for controls and instrumentation, prototypes for the "Guidance, Navigation, and Control" subsystem of the rocket. This included development in LabView, PCB design for avionics using Altium, engine valve control in a hybrid prototype, SoC controls, and low-cost, reliable wireless networks.
- **Course Projects:** Imposed into designated leadership roles for all applicable technical groups.
- **Island Health's Code Hack 2020 and the following bid proposal:** Researched, conducted interviews, and wireframed an app utilizing Island Health's current web infrastructure to personalize health records. Then, co-led the team in curating a technical RFP response.