

# Robert Murch

Software Engineer | Systems-Focused | Remote

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## PROFESSIONAL SUMMARY

Software engineer with 8+ years of experience working on large, long-lived production systems in embedded Linux environments. Background includes implementing features, diagnosing complex system issues, and maintaining reliability in customer-facing applications.

Over time, took on broader responsibility in areas like release readiness, defect prioritization, and cross-team coordination, helping ensure work stayed aligned with system behavior and delivery constraints.

Regular user of AI-assisted development tools, primarily through terminal-based workflows (Claude Code, Codex CLI, Gemini CLI), leveraging them for debugging, code comprehension, and system-level analysis. Use structured approaches to guide AI behavior, including maintaining local context, defining reusable prompts, and using repository-level instruction files to improve consistency and reduce repeated effort.

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## CORE COMPETENCIES

### Languages and Systems

- C, C++, Embedded Linux, Qt, QML

### Development Tools and Workflow

- Git, SVN, Jenkins
- Bugzilla, Review Board, LeanKit

### Engineering Practices

- Debugging complex system behavior across multiple components
- Production defect investigation and resolution
- Agile and Scrum participation (planning, reviews, retrospectives)
- Release readiness and delivery awareness
- Cross-team communication and requirements clarification

### Foundations

- Computer engineering fundamentals including digital logic, electronics, circuit design, and control systems
  - Strong grounding in the underlying mathematics and physics of these systems
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## AI-ASSISTED ENGINEERING

- Daily use of terminal-based AI tools (Claude Code, Codex CLI, Gemini CLI) as part of development workflow
  - Use these tools for debugging, code comprehension, and navigating large codebases
  - Apply structured approaches to guide behavior, including maintaining local context, reusable prompts, and repository-level instruction files
  - Experience setting up and refining local workflows, including environment setup, permissions, and safe usage patterns when working with AI tools
  - Document approaches and usage patterns to improve consistency and reduce repeated effort
  - Aware of common failure modes and limitations of AI tools (hallucinations, context gaps, overreach) and adjust usage accordingly
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## PROFESSIONAL EXPERIENCE

**TeeJet Technologies — *Software Systems Consultant (Contract)*** | Jan 2025 – Mar 2026 | Remote

Re-engaged as a contract contributor following relocation, continuing work on the same systems with expanded responsibility while remaining fully hands-on in development and debugging.

- Continued development and debugging work across existing C/C++ and Qt/QML codebases
- Contributed directly to the final development and release of a major production system
- Analyzed system behavior across legacy and active components to support stability and release readiness
- Participated in design discussions, code reviews, and documentation efforts as needed
- Remained fully integrated in team processes, including daily scrums, sprint planning, reviews, and retrospectives
- Worked closely with QA and engineering to ensure defects and system impacts were clearly understood and addressed
- Integrated terminal-based AI tools into daily workflow, improving efficiency when debugging and working across unfamiliar areas of the system

**TeeJet Technologies — *Software Developer I / II*** | May 2018 – Sept 2024 | Remote since 2020

Worked on agricultural guidance and control systems deployed in production environments. Responsibilities included implementing enhancements, fixing defects, and maintaining long-term system stability, with scope expanding over time to include design input, code review, and broader system-level awareness. Work frequently required tracing issues across multiple components and understanding system behavior end-to-end in order to diagnose and resolve production problems effectively.

- Implemented features and fixes across C/C++ and Qt/QML components running on embedded Linux systems
- Investigated and resolved production issues requiring cross-component debugging
- Participated consistently in Agile processes including daily standups, sprint planning, reviews, and retrospectives
- Contributed to bug triage and prioritization discussions
- Communicated system behavior and constraints to non-engineering stakeholders when needed
- Helped identify risks related to scope, timing, or technical limitations
- Collaborated with distributed teams, including coordination with international teammates
- Contributed to code reviews and design discussions as responsibilities expanded
- Occasionally facilitated Scrum ceremonies when needed
- Selected for formal Qt/QML training in California to deepen expertise in core UI technologies used within the system
- Represented the team at an international industry event, demonstrating equipment and supporting integration efforts with external partners

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## EDUCATION

**Montana State University Billings — *Bachelor of Science in Computer Engineering*** | 2018