

Michael Vincent Caldwell

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Professional Summary

Senior Software Engineer with 15+ years of experience designing and developing diagnostic, automation, and infrastructure software across enterprise security, embedded Linux, manufacturing validation, and cloud-integrated platforms. Expertise in Go, Python, C/C++, Kubernetes, Docker, CI/CD automation, distributed systems, and Linux-based environments. Proven ability to lead cross-functional engineering initiatives, deliver manufacturing-critical tooling, and build scalable telemetry and diagnostic systems used in development and production environments.

Technical Skills

Languages	Go, Python, C, C++, Javascript, Bash, Rust, Swift, Perl
Frontend	Vue.js, AngularJS, HTML5, CSS3, Javascript, SVG
Operating Systems	Linux/Unix, Embedded Linux, macOS, Windows, UEFI
Infrastructure & DevOps	Kubernetes, Docker, Jenkins, ArgoCD, Kafka, MongoDB, CI/CD, RPM Packaging
Source Control	Git, SVN, Perforce
Domains	Distributed Systems, Platform Engineering, Hardware Diagnostics, Telemetry Systems, Backend Services, Infrastructure Automation

Experience

Software Engineer II, Backend & Platform Engineering, Vivint (A Division of NRG)

Lehi, Utah, April 2025 — Present

- Designed and developed distributed diagnostic services in Go for analyzing customer device telemetry streamed through Kafka and persisted in MongoDB.
- Built backend tooling and telemetry analysis systems used to diagnose and triage issues across smart home and IoT product ecosystems.
- Implemented CI/CD deployment pipelines using Jenkins and ArgoCD for Kubernetes-hosted services, improving deployment consistency and operational reliability.
- Developed Vue-based dashboards and REST API integrations enabling internal teams to visualize diagnostic and operational data.
- Collaborated with cross-functional stakeholders to define technical requirements, balance delivery timelines, and architect scalable diagnostic solutions.

Senior Software Engineer, Symantec Corp.

Draper, Utah, July 2022 — February 2025

- Served as lead developer for diagnostic software used to validate enterprise security appliances during product development and manufacturing rollout.
- Delivered manufacturing-critical diagnostic tooling in support of new hardware platform launches under aggressive development timelines.
- Developed low-level hardware diagnostic and validation tooling using C/C++, Python, and

Embedded Linux.

- Coordinated with ODM partners and cross-functional engineering teams to triage hardware failures and resolve manufacturing validation issues.
- Built and maintained automated testing frameworks for web-based products using Python, Selenium, and Robot Framework.

Senior Software Engineer, Broadcom Ltd. (ECD Division)

Irvine, California, May 2016—July 2022

- Designed and developed diagnostic applications for hardware analysis and manufacturing validation workflows.
- Built cross-platform GUI applications in Python and WxWidgets integrated with low-level C components interfacing directly with hardware drivers.
- Developed automation pipelines for Linux driver build, packaging, and RPM distribution workflows using Python and Bash.
- Created Docker-based build and deployment tooling to streamline engineering and validation environments.
- Improved internal development workflows through automation and tooling enhancements supporting engineering and manufacturing teams.

Software Engineer, Emulex Corporation

Costa Mesa, California, May 2011—May 2016

- Developed CI/CD workflows, automated testing infrastructure, and engineering productivity tooling using Jenkins, Python, and Bash.
- Built internal web applications and utilities for parsing, validating, and visualizing diagnostic and engineering reports.
- Developed modules for enterprise engineering workflow systems supporting Engineering Change Requests (ECRs).
- Collaborated with interdisciplinary engineering teams to diagnose field issues and implement production-ready solutions.
- Managed Linux-based virtualized environments supporting build systems and internal engineering applications.

Education

B. S. Degree, **Manufacturing Engineering Technology**, Brigham Young University

Provo, Utah, April 2010

Patents & Technical Contributions

- Inventor, Full-Text Medical Interface, Annotation and Communication Systems
US Patent No. 8,843,852
- Inventor, Visual Selection of an Anatomical Element for Requesting Information About a Medical Condition
US Patent Application No. 20140372955

Certifications & Professional Affiliations

- Certified Manufacturing Technologist (CMfgT)
- Member, Society of Manufacturing Engineers
- Toastmasters ACS, ALB
- Eagle Scout

Additional Resources

- GitHub Profile [github.com/mryingster]
- Software Portfolio [coastalvectors.com/software.php]
- LinkedIn Profile [linkedin.com/in/michaelcaldwell11]



Letters of Recommendation

Jared Robinson, Manager, Software Engineering at Vivint
Michael's Manager 2025—2026

When I hired Michael, he brought an immediate positive impact to the team. He has the ability to communicate effectively with a wide range of personalities and functions, helping teams collaborate effectively while navigating challenges in a professional and respectful way. His always calm, thoughtful approach helped with alignment and facilitated productive conversations.

One of his stellar strengths is his ability to translate complex technical terminology into accessible language that our business stakeholders could understand and act on. He fosters trust and productive partnerships across teams.

John Chamberlain, VP Engineering at Broadcom
VP over Michael's organization, 2011—2022

Michael is a quick learner and always gets the job done. He continuously acquired new skills and his role expanded accordingly. He was an asset on teams and helped the team focus on what was important and smoothed ruffled feathers on occasion. Michael was a high performing contributor and is very conscientious. I would highly recommend him.

Nandkishor Rane, Senior Principal HW Engineer at Broadcom
Michael's Manager 2022—2025

I had the opportunity to work with Michael Caldwell at Broadcom Inc., and I'm happy to recommend him based on my direct experience working with him as a Hardware Engineer. Michael worked with me as a Software Diagnostics Engineer and played a key role in developing and improving manufacturing diagnostics for our security appliances. He demonstrated solid technical skills in both hardware and software, as well as a strong work ethic.

One of Michael's strengths is his ability to quickly adapt to new challenges. When tasked with working on legacy Symantec products, he took the time to thoroughly understand the systems and made meaningful contributions despite the complexity of the codebase. His ability to navigate and improve legacy systems was a valuable asset to the team.

Michael also demonstrated strong initiative by proposing a new diagnostic codebase using embedded Linux using Python and Javascript for our security server platforms. This innovative approach aimed to reduce development time for diagnostics and accelerate time-to-market for the product, showcasing his forward-thinking mindset and technical expertise.

On a personal level, Michael is a collaborative team member who communicates technical concepts clearly and works well with others. He is always willing to take on challenges and consistently puts in the effort to deliver results.

I consider Michael to be a reliable and skilled engineer who brings technical expertise and a practical approach to his work. I'd recommend him to any team looking for someone who can quickly get up to speed and contribute effectively.

Sanjeev Putta, Senior Principal HW Engineer at Broadcom
Michael's Manager 2013—2022

As his manager for 8 years, I found Michael to be highly organized and have exceptional problem-solving skills. He is self-motivated and his proactive approach to learn new technologies added value to our projects.

He possesses exceptional communication skills, both verbal and written. He had the opportunity in his position to give presentations to both leadership and end-users of our product. He also wrote specs and user guides for the tools we developed.

He worked on diagnostics and provisioning software at Broadcom. He was instrumental in automation of several tasks including testing, packaging, and delivery.

He is well versed in C, Python, Linux/Bash, and web technologies.

Mike Goodman, Senior Development Manager at Amazon
Michael's Manager at Emulex 2011—2013

I am writing to provide a strong recommendation for Michael Caldwell, an exceptional software engineer whom I had the privilege of managing for several years. During our time working together, Michael consistently demonstrated strong technical skills, leadership potential, and a commitment to excellence.

I witnessed his progression from a talented engineer to a Senior Software Engineer, where he made significant contributions to our organization's technological capabilities. One of his most notable achievements was leading the development of a comprehensive manufacturing validation application that successfully addressed multiple product variations, showcasing his ability to tackle complex technical challenges with precision and innovation.

A key strength is his ability to modernize and improve existing systems. He played a crucial role in migrating legacy software tools to work with a modern validation framework, demonstrating both technical expertise and strategic thinking. He excelled at discussing requirements and carefully coordinating version rollouts with our offshore manufacturing team.

He is detail-oriented, combining meticulous attention to specifics with a remarkable bias for action and delivery. Michael has the ability to see the big picture while consistently making sound decisions. His strategic thinking allows him to understand complex systems and develop effective solutions.

Perhaps most importantly, Michael is an exceptional team player who builds trust through complete transparency. His communication skills and collaborative approach make him a valuable asset to any team. Colleagues and stakeholders alike appreciate his openness, reliability, and commitment to shared success.

I confidently recommend Michael Caldwell for any software development or technical leadership role. His combination of technical expertise, strategic thinking, and interpersonal skills make him an outstanding professional who will add significant value to any organization.