Bob Cravens

Professional Software Developer / Manager / Director

Innovative professional with a dynamic background in software engineering and application architecture. Seasoned leader adept at spearheading teams to develop and maintain cutting-edge full-stack solutions.

bob.cravens@gmail.com | 608-320-1824 | Verona, WI | linkedin.com/in/bobcravens

Profile

- ✓ **Leadership:** Ability to lead and inspire software engineers towards achieving company goals.
- ✓ **Strategic Planning:** Proven track record of providing strategic leadership and vision.
- ✓ **Team Management:** Proficiency in managing and growing teams, including hiring, mentoring, and performance evaluation.
- ✓ **Project Management:** Adept at leading cross-functional teams in the development and maintenance of robust full-stack solutions, ensuring high availability, scalability, and security for backend systems.
- ✓ **Technical Expertise:** Deep understanding of software engineering principles, modern technologies, and industry best practices. Enthusiastic about continuous learning and staying abreast of emerging technologies to drive innovation.
- ✓ **Problem-Solving Skills:** Aptitude for identifying and resolving complex technical issues efficiently, both independently and collaboratively.
- ✓ **Communication Skills:** Excellent verbal and written communication skills to effectively communicate with stakeholders and team members.
- ✓ **Architectural Leadership:** Demonstrated ability to provide architectural leadership, guiding the design and implementation of scalable, reliable, and maintainable solutions.
- ✓ **Stakeholder Management:** Excellence in building and maintaining relationships with key stakeholders, including product managers, executives, and external partners.
- ✓ **Change Management:** Skilled in driving organizational change and adapting to evolving business needs.
- ✓ **Data Informed Approach:** Experienced in establishing data-driven insights and cultivating a data-driven culture to optimize business processes.

Experience / Skills

Leadership	Strategic Thinking	Team Management
Project Management	Communication	Technical Proficiency
Problem Solving	Innovation	Risk Management
Change Management	Quality Assurance	Regulatory Compliance

Languages: Python, PHP, C#, C++, Node, JavaScript, HTML, CSS, …
Frameworks: Laravel, Django, Flask, ASP.NET, Vue.js, React, Bootstrap, …
Servers: Nginx, IIS, Apache, MySQL, PostgreSQL, SQL Server, Redis, RabbitMQ, …
CI/CD: Bitbucket, Github, Gitlab, JIRA, Azure DevOps, Jenkins, Docker, …
Integrations: Active Directory, Workday, ADP, Azure, Stripe, MailGun, Digital Ocean, Twilio, …

Work Experience

Senior Manager Software Engineering
GenesisCare (formerly 21st Century Oncology)

Reported To: CTO, VP BI
Healthcare - Cancer Treatment

August 2015 - February 2024

- Spearheaded the conception and implementation of Asset IQ, an internal web-based platform, strategically created to enhance operational efficiency through intuitive dashboards and features.
- Orchestrated the seamless integrated disparate data sources within Asset IQ to offer comprehensive and integrated views and metrics, facilitating data-informed decision-making.
- Instrumental in the widespread adoption of Asset IQ across multiple departments, including RT, Physics, Engineering, and Dosimetry, spanning various organizational levels from individual contributors to division executives.
- Played a pivotal role in the development of Adaptivo, a cutting-edge patient dosimetry application, by leading the architectural design efforts to create a modern and user-friendly web experience.
- Architected the design of Adaptivo's resilient processing pipeline, enabling support for asynchronous job queues and ensuring high availability of critical functionalities.
- Assisted in the deployment of Adaptivo into beta and production environments, providing support to various teams and ensuring seamless integration with existing workflows.

Senior Manager System Analytics
Accuray

Reported To: VP Customer Support
Medical Device - Cancer Treatment

January 2014 - August 2015

- Formulated and presented a forward-thinking data aggregation and analytics proposal to the Executive team, securing funding to establish an analytics team dedicated to enhancing the performance of TomoTherapy and CyberKnife radiation oncology products.
- Directed the end-to-end project lifecycle, including roadmap planning, backlog management, and capacity planning, while empowering team members to drive towards project milestones, ensuring successful project execution and delivery.
- Spearheaded the architecture and implementation of a unified, quasi-realtime data collection technology for TomoTherapy and Cyberknife products, enabling seamless data transmission from global installations to a centralized data-warehouse, optimizing data accessibility and analysis capabilities.
- Developed an optimized data model for the storage of collected data, prioritizing fast reads for reporting purposes while maintaining acceptable write speeds, ensuring efficient data retrieval and analysis.
- Led the design of a custom web-based dashboard and reporting solution (Up Center) tailored to provide role-specific views of the data, empowering stakeholders to make data-driven decisions. This solution facilitated troubleshooting, enabled proactive service opportunities, and facilitated remote service solutions, enhancing overall operational effectiveness and customer satisfaction.

Research Software Manager
Accuray

Reported To: Director of R&D
Medical Device - Cancer Treatment

2011 - January 2014

- Spearheaded the development of TomoTherapy Quality Assurance (TQA), a user-friendly application designed to automate the collection and analysis of key metrics for machine QA within the HiArt system. This application revolutionized daily, monthly, annual, and as-needed testing processes, resulting in significantly improved operational efficiency and informed decision-making for medical physics staff.

- Managed the technical development of TomoLink, a cutting-edge application enabling remote diagnostics of the HiArt system. By automating publication of system data to a central data-warehouse, TomoLink provided invaluable proactive troubleshooting information, enhancing overall system reliability and customer support capabilities.

Lead Applied Physicist
TomoTherapy

Reported To: Director of R&D
Medical Device - Cancer Treatment

2005 - 2011

- Led the development and research initiatives aimed at creating software applications to enhance operational efficiency and effectiveness for both internal and external stakeholders.
- Directed the development of TomoTherapy Quality Assurance (TQA), a user-friendly application designed to streamline the collection and analysis of critical metrics for machine QA within the HiArt system. This innovative solution facilitated a more efficient and informed approach to daily, monthly, annual, and as-needed testing processes for medical physics staff.
- Orchestrated the technical development of TomoLink, an advanced application enabling remote diagnostics of the HiArt system. By establishing a centralized data publishing mechanism to a Customer Support location, TomoLink provided invaluable proactive troubleshooting information, enhancing system reliability and customer support capabilities.

Physicist
TomoTherapy

Reported To: Director of R&D
Medical Device - Cancer Treatment

2003 - 2005

- Played a pivotal role in enhancing the Quality Assurance processes for the TomoTherapy radiotherapy machine.
- Automated and streamlined the MVCT commissioning process. Eliminated the need for on-site visits by specialists by integrating commissioning into the manufacturing workflow. This optimized the manufacturing process, eliminated resource constraint, and reduced cost.
- Automated and streamlined the treatment planning commissioning process. Transformed a previously manual and time-consuming procedure requiring specialized expertise (Medical Physicist) into a streamlined process that reduced commissioning time from approximately 30 days to 2-3 days, significantly accelerating time-to-market.
- Led the development of hardware, software, and processes for dosimetric 'twinning' of the TomoTherapy machine to a pre-created gold standard Treatment Planning System model. This twinning system allowed production to ramp up by reducing the need for specialized expertise (Medical Physicist). The gold standard models removed “snowflake models” from the install base allowing for more efficient customer support.

Education

PhD (all but dissertation) Electrical Engineering, Minor Physics
University of Wisconsin - Madison

MSEE, Electrical Engineering
University of Wisconsin - Madison

BSEE, Electrical Engineering
University of Wisconsin - Madison