

## Contact

1235 Stone Creek Dr  
Lawrence KS, 66049  
7852138975 (Mobile)  
yersh13@gmail.com

[www.linkedin.com/in/joshmcvey](http://www.linkedin.com/in/joshmcvey)  
(LinkedIn)  
[joshmcvey.com](http://joshmcvey.com) (Personal)  
[github.com/y3rsh](https://github.com/y3rsh) (Portfolio)

## Top Skills

Leadership  
Project Management  
Solution Architecture

## Certifications

CTFL

# Josh McVey

Senior Software Engineer | AI Infrastructure & Platform | Full-Stack to DevOps | Lab Robotics  
Lawrence, Kansas, United States

## Summary

I build and ship things end to end. At Opentrons I manage the build and release team responsible for two robot operating systems and the full application suite and I'm hands on, doing the work alongside them. Every version, every tag, every deployment. I'm also the full-stack developer on Opentrons AI and the Protocol Library, and I own authentication and authorization across all web products.

That range is real and deliberate. I manage people, processes, and I write code. I work closely with product and design. I've designed OAuth/OIDC auth architecture, built AI-driven robot interaction tooling with TypeScript/Python clients, and influenced product strategy for where AI fits in Opentrons products. I can lead a team standup, run an architecture conversation with a CTO, ship a new feature on Opentrons AI, mentor folks on their API testing, and cut a release.

I use AI tools constantly and treat that as a core part of how I work. I build skills, rules, and workflows that make AI more effective in my daily development practice. I'm always pushing that further as the tooling evolves.

I'm moving toward customer-facing engineering roles where the job is making AI actually work in production -- real implementation and adoption in technical environments where the stakes are real.

If that's the problem you're trying to solve, I'd like to talk.

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## Experience

Opentrons Labworks Inc.

4 years 11 months

Lead Software Engineer and Build & Release Manager

February 2024 - Present (2 years 3 months)

Queens, New York, United States

Continuing my role as Lead Software Developer and SDET, I also lead efforts to improve software delivery across the organization—driving more efficient, timely, and high-quality releases for all our products, platforms, and packages. This includes streamlining processes, enhancing test automation, and fostering cross-team collaboration to ensure excellence at every stage of the release lifecycle.

### Senior Developer and SDET

June 2021 - Present (4 years 11 months)

Queens, New York, United States

At Opentrons, I lead the architecture, development, and management of our core cloud infrastructure and services, including full ownership of the Protocol Library web platform <https://library.opentrons.com> and Opentrons Accounts. I serve as project manager, architect, and lead developer—balancing strategic vision with hands-on execution.

Key contributions include:

Cloud platform ownership: Designing and evolving scalable, secure web services that power critical parts of the Opentrons ecosystem

Release cycle optimization: Architecting and implementing robust testing frameworks and automated processes to drive faster, reliable robot software releases

CI/CD automation: Leveraging GitHub Actions and AWS to build seamless continuous integration and deployment pipelines, boosting developer productivity and deployment agility

Monitoring & reliability: Utilizing Datadog for detailed performance monitoring and proactive incident detection to maintain high availability and system health

Cross-functional collaboration: Partnering closely with product, QA, and engineering teams to ensure smooth, coordinated releases and rapid issue resolution

Leadership & problem solving: Guiding teams through complex technical challenges while fostering a culture of continuous improvement and quality focus

My role combines deep technical expertise with strategic leadership, contributing directly to the innovation and operational excellence that drives Opentrons' success in automated biologics robotics.

## TEKsystems

### Test Automation Architect

August 2019 - June 2021 (1 year 11 months)

Remote

Practice Architect - Continuous Testing

<https://www.teksystems.com/en/devops-agile#our-capabilities>

#### Recent Projects

- Gaming Engine feature testing using pytest. Led a team of 10. Python
- .com testing in the Energy sector. UAT in browser tests in Azure Dev Ops. Leading a team of 5. JavaScript Typescript

## Rackspace, the #1 managed cloud company

### Software Developer - Test III

November 2016 - August 2019 (2 years 10 months)

Remote

Lead software developer contributing to multiple teams. Lead SDET on the dedicated device web portal. I contribute by writing code, reviewing code, planning, researching, and leading. Products include customer facing web applications, ETL processes, and apis.

Python - pytest requests selenium click, Java - testng selenium restAssured, Javascript & Typescript - Ava Puppeteer, Groovy - Grails Spock, Jenkins Openshift (Kubernetes), Helm, Docker, Git, GraphQL, Streamsets Data Collector, Elastic Search

## Xpanxion

3 years 5 months

### Test Architect

July 2016 - November 2016 (5 months)

Remote

## Lead Automation Engineer

July 2013 - July 2016 (3 years 1 month)

Remote

Hands on QA strategy and automation consultant. Typical engagements are long-term and strategic.

5 years of Selenium experience in C# and Java

4 years of agile experience working with experienced agile practitioners and mentoring new agile practitioners. SCRUM and Kanban

Authored multiple frameworks to implement or enhance automated testing for web browsers, web services, ETL, mobile, and desktop projects

Experienced with many tools for SDLC process and quality practice like JIRA, Confluence, TFS, Rally, Bugzilla, SharePoint, and Quality Center

Experienced in Performance Testing and Performance Monitoring with Loadrunner, Jmeter, custom packages, and Visual Studio

Experienced implementing and sustaining Behavior Driven Development (BDD) and Test Driven Development (TDD) strategies using testing packages like Cucumber-JVM, JBehave, JUnit, TestNG, NUnit, and MSTest

Experience with CI/CD (Continuous Integration/Continuous Deployment) tools include TFS, GIT, SVN, Jenkins, Bamboo, Udeploy, Microsoft build tools, and Chef

Broad Database experience using Oracle, SQL Server, DB2, MySQL, PostgreSQL, MongoDB, Solr Experience coding solutions in many languages and tools: Java, C#, Python, Groovy, SoapUI, QTP (UFT), RestAssured, Sikuli, CodedUI, and many others

## Epiq Systems

Software Automation Engineer

November 2012 - July 2013 (9 months)

Kansas City, Kansas

Extensive automation with C# in unit test and coded ui framework on web and desktop applications.

## Xpanxion

Automation Test Lead, Manager

December 2009 - November 2012 (3 years)

Kearney, NE

Establish Automation Frameworks for engagements

Directed Quality Assurance for the entire business unit of Xpanxion's second largest client.

Planned, guided, and reviewed all QA team members and deliverables for multiple projects.

Ensured deliverable quality across client/Xpanxion/third party contracting personnel.

Heavily involved in the recruiting, interviewing, onboarding, training, and mentoring of individual employees and teams.

Served as Lead Quality Assurance Analyst on customer facing enterprise web applications, multifaceted ETL, and Database projects  
Created automation scripts (Selenium, QTP, soapui, Codedui ).  
Completed Web Application performance and measurement effort (Fiddler and Loadrunner).  
Composed and delivered performance reviews.  
Created and reviewed onboarding and training curriculum  
Provided technical consulting on tools and QA strategies to clients

## Standard Beverage

### Junior Software Developer

April 2009 - December 2009 (9 months)

Lawrence, Kansas

Served as one of only 5 team members providing development and support services to an organization with over 300 employees. Provided excellent internal customer service and employee training. Exposed to many different areas of IT.

ASP.NET, (VB.NET code behind) Web application for input and analysis of product market penetration.

Company-wide redesign of reporting.

Consulted with each department to create Web Applications and/or Spreadsheets to meet the business needs.

Operations Dashboard Web Application. Tying Operations metrics to a useful dashboard and Drilldown tools for VPs and Operations managers.

Multiple tweaks and performance enhancement to existing code on the IBM iSeries in RPGIV. Performance tweaking in SQL. Database designer and manager for all application databases on DB2 and Microsoft SQLServer2008.

## Target

### Group Leader

April 2006 - April 2009 (3 years 1 month)

Topeka, Kansas

Rapidly promoted in recognition of exceptional performance as a Leader. Tasked with directing all aspects of departmental operational technical functions for this thriving facility employing over 500 associates. My Primary role was performance management of my team including hiring, performance reviews, coaching, and disciplinary action up through termination. I maintained an invigorated a competitive team through recognition, respect, and relationship building.

- Improved performance of my team from worst in the department to leading the department in base adjusted productivity measures and quality.
- Consistently under spend payroll budgetary plan by 5%-25%
- Rolled out numerous technical changes in processes and procedures within proprietary inventory management and tracking systems.
- Liaison with Development Team for Web Applications for Payroll and Performance tracking.
- Created database driven spreadsheets and many other spreadsheets that tracked and analyzed everything from vacation calendars to budgets.
- Served as facility representative and active participant during Executive recruitment and interviews.
- Single-handedly planned, organized and implemented the Distribution Center Summer Picnic for 500 team members and their families.

### Self Employed

Information Technology and Media Implementation Specialist

May 2003 - April 2006 (3 years)

Managed and Created Multiple websites, intranets, and information strategies for non-profit organizations. Implemented networks and audio visual systems. Developed Contact Databases for organizations. Created Video Presentations and training. Trained end-users on implemented Technologies.

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## Education

Kansas State University

BS, Physical Sciences · (1996 - 2003)