Aaron Saarela

+1 (919) 672-3512 | aaron.saarela@gmail.com | www.linkedin.com/in/aaronsaarela

SUMMARY

Experienced and versatile Principal Software Engineer with 15+ years of success designing, building, and leading full-stack solutions for SaaS, healthcare, education, and marketing automation. Proven ability to lead cross-functional teams, architect distributed systems, and deliver secure, scalable, and performant applications. Adept in Java, Spring, Angular, NodeJS, CI/CD, and cloud platforms (AWS, OCI). Strong advocate for clean code, testing practices, and developer productivity. Looking to bring leadership and technical expertise to an impactful team.

EXPERIENCE

Principal Software Engineer   **July 2020 – May 2025**
Pattern Health · Durham, NC (Remote)
Pattern Health is a healthcare technology company providing tools for researchers and clinicians to plan, execute, and manage research studies, clinical support programs, and patient care initiatives. As a software engineer on a cross-functional team, I contributed to the full lifecycle of the Pattern Health platform — from ideation and development to deployment and support.

- Scoped and implemented full-stack features using Java, PostgreSQL, Angular and RxJS.
- Realized a clinical risk prediction system for orthopedics in collaboration with Duke University researchers, providing pre-operative complication risk insights, supporting improved outcomes, reducing readmission rates, and delivering cost savings.
- Designed and implemented privacy-focused enhancements to restrict personally identifiable information visibility within the platform, helping ensure compliance with study requirements and data protection standards.
- Integrated 3rd party API platforms into the Pattern ecosystem including Epic EHR, Zoom, and Pearson.

Technologies: AWS, Java 17, Dropwizard, Postgresql, Angular 15, RxJS, Gitlab CI, Jira, REST, SaaS

Oracle Corporation
Software Architect   **June 2019 - July 2020**
Oracle (Bronto division), Durham, NC (hybrid)
The Bronto marketing platform provided a SaaS for clients to communicate with their customers via email, tracked customer behavior throughout the purchasing process, gave insights into the effectiveness of email marketing campaigns, and quantified the return on spend for our client's marketing dollars. I worked with global colleagues to secure and evolve the Bronto marketing platform.

- Planned the transition of Bronto technologies from AWS to Oracle Cloud Infrastructure (OCI).
- Developed strategies to re-architect legacy on-premise services into modern, cloud-based microservices..
- Served as a liaison to Oracle's software security and compliance team, ensuring all Bronto software adhered to enterprise-grade security and compliance standards.
- documented Bronto's secure email infrastructure, covering DNS support for private client domains and TLDs, SPF record policies, DKIM signature management and rotation, IP block allocation, and IP warming protocols — foundational for high-reputation email delivery.
- Collaborated across all Bronto teams to define and support non-functional requirements including security, scalability, performance, and usability, driving consistent architectural standards across the platform.

Technologies: AWS, OCI, Java 11, Spring Framework, git, Graphite, REST, gRPC, SOA, SaaS

Oracle Corporation
Lead Software Engineer   **August 2014- June 2019**
Oracle (Bronto division), Durham, NC (on-site)
As Software Team Lead, I drove the evolution of the Bronto marketing platform's workflow automation system — a distributed rule-based platform that powered client marketing campaigns by processing over 1 billion monthly events and triggering automated customer actions.

- Scoped and implemented distributed system features using Java, Redis, HBase, Hadoop, and MySql.
- Led engineering efforts to improve performance, reliability, and scalability, achieving a 20x increase in processing efficiency and significantly reducing support escalations.
- Delivered $250K in annual cost savings by refactoring the system's use of a third-party SaaS provider.
- Designing and implementing gRPC models for internal microservice integrations.
- Built RESTful endpoints for external client interactions.
- Collaborated across teams to drive improvements in code quality, system observability, and architectural best practices in a fast-paced, high-throughput SaaS environment.

Technologies: AWS, Java 11, Spring Framework, Redis, Hadoop, HBase, PHP, git, Graphite, REST, SOA, SaaS

Amplify Education
Software Architect   **January 2013 - August 2014**
Amplify Education, Core Learning Group, Durham, NC (on-site)
Amplify is a leader in public school K-12 assessment technologies. Amplify embarked on a project to bring mobile technologies into the K-12 classroom to deliver curriculum, content and assessments to students and teachers via tablets. I worked on the student enrollment system required to access the Amplify platform.
- Designed and implemented an ETL system to import student information.
- Worked closely with product owners and business stakeholders to investigate and resolve technical challenges.
- Served as a key liaison between technical teams and non-technical stakeholders to align on product goals and system capabilities.
- Standardized the underlying data model, improving consistency across ingestion pipelines and enhancing system maintainability.

Technologies: AWS, Java, MongoDB, Kafka, Jenkins, SOA

Amplify Education
Senior Software Engineer   **December 2011 - January 2013**
Amplify Education, Shared Learning Infrastructure (SLI), Durham, NC (on-site)
Amplify was contracted by the Bill Gates Foundation to realize the Shared Learning Infrastructure (SLI) initiative. The goal was to standardize education data and provide a reference implementation of these standards for use by school districts and service providers that worked with these districts. I worked as a senior software engineer to design and develop this reference implementation.
- Delivered data models and RESTful APIs that powered SLI-based applications.
- Implemented backend services using Java, MongoDB, and Hadoop.
- Deliver UI/UX implementations using Ruby on Rails and Javascript.
- Deployed solutions to AWS EC2 instances.
- Wrote public-facing API documentation and assisted in hackathons to evangelize the platform.

Technologies: AWS, Java, Ruby on Rails, MongoDB, Jenkins, SaaS

EDUCATION & CERTIFICATIONS

The University of Michigan, Ann Arbor, Michigan
Bachelors of Science, Computer Science
Member, ACM
Member, IEEE Computer

SKILLS

Software Engineering	SaaS	Guice
Technical Leadership	SOA	Angular (v15)
Software Architecture	GIT	REST
Agile Methodologies	Java (17)	MongoDB
Full Stack Development	Spring Framework	PostgreSQL
Continuous Integration	Dropwizard	Amazon Web Services (AWS)