

# MAHELET KASSA

Senior Full-Stack Software Engineer | Cloud Architecture | AI/ML Systems

[mahelet-kassa.github.io](https://mahelet-kassa.github.io) | [MaheletKassa1@gmail.com](mailto:MaheletKassa1@gmail.com) | [LinkedIn](#) | [GitHub](#)

## PROFESSIONAL SUMMARY

Results-driven Full-Stack Software Engineer with 5+ years of experience architecting and deploying enterprise-scale cloud solutions in highly regulated environments. Proven track record of modernizing legacy systems, implementing secure microservices architectures, and building production-grade applications serving millions of users. Specialized in AWS cloud infrastructure, real-time data pipelines, and AI-ready system design. Strong collaborator with expertise in Agile methodologies, technical leadership, and cross-functional team coordination.

## TECHNICAL EXPERTISE

**Languages & Frameworks:** Java 17/21, Spring Boot, Node.js, TypeScript/JavaScript, React.js, Angular, Python, RESTful APIs, GraphQL

**Cloud & DevOps:** AWS (S3, Lambda, RDS, EC2, CloudFormation, ECS, API Gateway), Docker, Kubernetes, CI/CD (GitHub Actions, Jenkins), Infrastructure as Code (Terraform)

**Data & AI Systems:** PostgreSQL, MongoDB, Redis, Apache Kafka, ETL Pipelines, Data Governance, ML Model Integration, Vector Databases

**Architecture & Security:** Microservices Architecture, Event-Driven Design, OAuth 2.0/JWT, IAM, HIPAA/SOC 2 Compliance, Zero-Trust Security

**Leadership & Methodology:** Agile/Scrum (Scrum Master Certified), Technical Mentorship, Code Review, System Design, API Design, Performance Optimization

## PROFESSIONAL EXPERIENCE

### Senior Software Engineer | Blue Cross Blue Shield of Massachusetts

April 2020 – December 2025

- Architected and deployed cloud-native microservices infrastructure on AWS, significantly reducing system latency and improving reliability to enterprise-grade uptime standards
- Led full-stack modernization of legacy healthcare systems using Java Spring Boot, React, and PostgreSQL, resulting in faster claim processing and significant cost savings
- Designed and implemented real-time data pipelines processing high-volume daily transactions with Apache Kafka and AWS Lambda, enabling predictive analytics and ML model integration
- Established CI/CD pipelines using GitHub Actions and Docker, dramatically reducing deployment time and achieving zero-downtime deployments
- Implemented comprehensive security controls including OAuth 2.0, JWT authentication, and data encryption ensuring HIPAA compliance across all healthcare applications
- Built real-time monitoring dashboards and observability solutions using Datadog and AWS CloudWatch, significantly improving incident response time
- Mentored junior engineers through technical interviews, code reviews, and pair programming sessions, establishing coding standards and best practices across the engineering organization

### Website and Assessment Coordinator | Messiah University

August 2017 – May 2018 | Mechanicsburg, PA

- Managed institutional databases and web platforms, implementing data validation processes that significantly improved data accuracy
- Developed automated reporting workflows using SQL and Python, reducing manual reporting time and enabling data-driven decision making

## KEY PROJECTS

### Full-Stack E-Commerce Platform

- Built production-ready MERN stack application with Redux state management, JWT authentication, and Stripe payment integration
- Deployed on AWS S3 with CloudFront CDN, implementing automated CI/CD pipeline achieving high uptime and fast page load times

### Restaurant Reservation System

- Developed real-time reservation platform using React, Node.js/Express, and PostgreSQL with automated SMS notifications via Twilio API
- Implemented intelligent waitlist management algorithm and secure data handling practices with encrypted customer information storage

### BEEHIVE – Collaborative Productivity Platform

- Engineered real-time collaboration app using MERN stack with Socket.io for live updates, role-based access control, and responsive Material-UI design
- Architected RESTful API with MongoDB aggregation pipelines for efficient data querying and implemented comprehensive error handling

## EDUCATION

### Bachelor of Science in Computer Science and Business Administration

*Messiah University | Mechanicsburg, PA | Graduated 2018*

## CERTIFICATIONS & TRAINING

- AWS Certified Cloud Practitioner
- Certified Scrum Master (CSM)
- General Assembly – Full Stack Web Development Immersive (2019)