Sean McNealy

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Specialties

Experienced in software development, stream data processing, distributed and high availability systems, security policy and security practices, software release CI/CD pipelines, operations dashboards, data analysis, and reporting. Focus on quality and technical leadership to improve products and teams.

Education

Georgia Institute of Technology, MS in Computer Science 2015 – 2016

Specialization in computational perception, which spans between machine learning and artificial intelligence. Foundational topics to the AI revolution we are in today. Graduate level courses include Computability Complexity and Algorithms, Advanced Operating Systems, Machine Learning, Reinforcement Learning, and Computer Vision.

University of Florida, BS in Computer Engineering 2003 – 2007

CIMAR, Center for Intelligent Machines and Robotics. I wrote software for the UF's DARPA Urban Challenge team. I worked on messaging protocols (JAUS, Joint Architecture for Unmanned Systems), planning (A* search for a path), and generally helping talented mechanical engineers navigate the software discipline. The team produced an autonomous Toyota Highlander.

Experience

Senior Platform Architect, Ware2Go A UPS company June 2020 – Present

My responsibilities were sometimes writing code and sometimes technical leadership.

I maintained an event based architecture on Kafka using Kotlin to keep up to date information constantly available and produce accurate and fast decisions and reporting. My role was designing and prototyping as well as choosing or developing tools and architectures that make the engineering teams more effective, efficient, and able to provide quality and verified features.

I was technical lead of a small team that developed the capability to match all e-commerce orders to inventory in the best fulfillment center. This is a critical piece of the company's operations and has complex functionality possibly splitting and backordering pieces of orders. It is the best tested code I've worked on. The results gave the company a strategically important capability during a company acquisition.

Tech stack included Kafka, Kubernetes, Pulumi, Datadog, Gradle, GitHub, Gitlab CI/CD, GCP Cloud Functions, BigQuery, Apache Spark, and Looker.

Staff Software Engineer, NCR June 2016 – June 2020

Scala application development and Salt and Ansible operations for a backend distributed system. Using Kafka message passing and Cassandra key value store to design a horizontally scalable system that centrally processes receipts from many small businesses. The system guarantees at-least-once delivery and aggregates to update daily sales and tax totals. This project let to an order of magnitude improvement in performance over the SQL Server based aggregation system they had been using.

The system handled all receipt messages received, millions a day. Both environment and data errors can be repaired by engineers, fixing thousands or more errors at a time or quickly recalculating aggregations of days or months of messages using low priority scheduling on the same CPUs. Used AWS to develop the system and migrated to GCP due to business demands.

Software Engineer, Travel Syndication Technology June 2014 – June 2016

Scala application development for a travel booking web application, using responsive presentation to show both mobile and desktop views. The company follows a daily deploy process to ship features for the customer facing application. I led a development team working on special features for travel agents. Agents require

modifications to bookings, additional reporting, white labeling, tracking of commissions, and integrating features between product offerings. Most of these require API integrations with travel systems.

Software Engineer, Dell Secureworks January 2011 – June 2014

Java, Scala, JavaScript, and Groovy/Grails application development in a REST service oriented architecture for applications providing internal tools and management and some customer facing interfaces.

Developed interfaces for rules engine editing and prioritizing actions on security events, customer onboarding, and customer asset tracking. Integrated databases from multiple securtity focused products to one platform.

I got an Acknowledgment in an O'Reilly book from a team member here. Becoming Functional by Joshua Backfield.

Software Engineer, IBM Internet Security Systems June 2007 – January 2011

Worked on several releases of SiteProtector, contributing in both C++ and Java. SiteProtector is ISS's reporting, agent control, event correlation, and security policy management software that works across a diverse range of ISS products. Work included using SSL/TLS, smart cards (government CAC card with PKCS#11 interface), RADIUS 2 Factor authentication, LDAP, Swing UI, and interfacing to OpenJPA.

Worked with the government services team to get SiteProtector FIPS140-2 certified to level 2.

Talks

Isolation Isn't All Bad (For Your Database), AJUG November 2025, dev/nexus March 2026

Miscellaneous

Languages: Scala, Kotlin, Java, C++, C, Rust, Python, SQL, JavaScript, TypeScript

National Merit Scholar, Eagle Scout, Scoutmaster for Atlanta Area Council leadership training 2018 and 2019, Red Cross Wilderness First Aid certified 2024, Freeside Atlanta hackerspace member, Neighborhood HOA Board Member