

Melissa Bolcar

Senior Solutions Architect (Enterprise & SaaS Platforms)

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SUMMARY

Senior Enterprise Solutions Architect with 18 years of experience designing and delivering large-scale, Enterprise supply chain planning and SaaS applications. Proven technical leader with deep expertise in enterprise Java, Spring Boot, microservices, event-driven architectures, and CI/CD modernization across global, multi-tenant systems. Extensive background driving SDLC transformation, DevOps adoption, and automated testing—improving deployment success rates from 70% to 98% in enterprise environments. Trusted architectural partner to product, engineering, and business stakeholders, with a strong ability to translate complex technical strategy into scalable, secure solutions. Recognized with multiple Technical Excellence Awards and twice elected as a Member of Group Technical Staff (MGTS), an honor awarded to only a small percentage of technical professionals.

TECHNICAL SKILLS

Languages and Frameworks: Python, Java, JavaScript, PL / SQL, HTML5, CSS3, Node.js, React.js, Apache Kafka, Spring Boot

AI and Data Science: Open AI, Python, Pandas, NumPy, SQL

Cloud & Platforms: AWS, Microsoft Azure, Google Cloud Platform (GCP), Docker, Kubernetes

Databases: Oracle, MySQL, PL / SQL, Postgres; data modeling, schema design, performance tuning, indexing, query optimization

Devops & Tooling: Git, Jenkins, Jira, SonarQube, Katalon, VS Code, Confluence, Github Actions

Architecture and Practices: System Design, Agile, Scrum, CI / CD, Microservices, Test Automation, Architecture/Detail design diagrams, Security Architecture, Identity & Access Management (IAM), Event Driven, Multi-tenant, Real Time, REST APIs

EXPERIENCE

TEXAS INSTRUMENTS

Dallas, Texas (Remote)

Senior Enterprise Solutions Architect

2011-Current

- Defined architecture strategies and roadmaps to support large-scale global operations and supply chain transformation initiatives.
- Provided technical leadership to large global development teams, mentored college interns, and directed full end-to-end SDLC execution for enterprise software used by thousands of users internationally.
- Spearheaded CI/CD, DevOps, and automated testing modernization. This boosted release quality and increased **first-pass deployment success from 70% to 98%**.
- Elected as **Member of Group Technical Staff in 2012 and 2018** (only a small percentage of TIers have obtained this title)
- Led system design and architecture reviews for distributed, enterprise-scale platforms supporting global operations.
- **Excellent communication skills** with a demonstrated ability to translate complex technical concepts for non-technical audiences.
- Received the **Technical Excellence Award in 2015** for architecting, designing, and leading a global team of 12 developers to implement an enterprise portal adopted by more than 3,500 employees worldwide.
- Recognized with the **Technical Excellence Award in 2013** for architecting, designing and implementing an automated version control framework for PL/SQL using Git, achieving complete (100%) code traceability and eliminating prior ad-hoc processes.

TEXAS INSTRUMENTS

Dallas, Texas

Application Developer

2008-2011

- Designed, developed and maintained highly available Supply Chain planning systems applications.
- Served as a champion for CI/CD adoption, establishing standards and practices that modernized delivery workflows.
- Developed PL/SQL-based backend services, database schemas, and performance-optimized queries.
- **Designed and developed application integrations** connecting multiple systems to support business-critical supply chain workflows.
- **Developed hundreds of data transformation programs** to move, join, and prepare large datasets supporting enterprise supply chain planning processes.

ENTREPRENEURIAL EXPERIENCE

Senior Solutions Architect (Independent / Self-Directed SaaS Projects), 2022-2025

- Conceived, architected, and started multiple SaaS **proof-of-concept and learning-focused applications** to explore m
- **Designed and implemented foundational SaaS components**, including data models, API contracts, secure authentication and authorization (OAuth/JWT, RBAC), web and admin workflows, and event-driven and batch processing pipelines.
- **Hands-on experimentation with modern technologies**, including Python, pandas, NumPy, AWS, Microsoft Azure, Matplotlib, and Plotly, to build, test, and validate architectural patterns.

EDUCATION

UNIVERSITY OF SOUTH FLORIDA, Tampa, Florida, **B.S., Computer Engineering**