

Rodrigo Alves, MS

Issaquah, WA, 98029 | (425) 209-6213 | rrodrigoa@gmail.com | [linkedin.com/in/rrodrigoa](https://www.linkedin.com/in/rrodrigoa)

DISTINGUISHED ENGINEER

Distinguished Engineer with nearly two decades of experience shaping architecture and delivering secure, scalable, and resilient systems across Microsoft Azure, Oracle OCI, and Microsoft Research.

Operates at the intersection of enterprise technical strategy and hands-on engineering, with deep expertise in distributed systems, cloud platforms, real-time data systems, and emerging Agentic AI architectures.

Known for turning ambiguous, high-impact problems into scalable platforms, driving technical direction across organizational boundaries, and guiding engineering organizations through complex platform modernization.

TECHNICAL SKILLS

C# | C++ | Python | Java | JavaScript | SQL | Azure | OCI | Kubernetes | Docker | Flink | Linux | REST APIs | CEP

CORE COMPETENCIES

Enterprise Architecture | Platform Strategy | Distributed Systems | Agentic AI | Cloud Infrastructure | Microservices & APIs
Real-Time Data Platforms | Reliability & Observability | Security & Compliance | Technical Leadership
Cross-Organizational Execution | Platform Modernization

PROFESSIONAL EXPERIENCE

GEICO, Seattle, WA

September 2026 - Present

Distinguished Engineer - Agentic AI & Enterprise Productivity

Enterprise architect and technical leader defining architecture and software strategy for Agentic systems, enterprise productivity platforms, and cross-organizational integrations across GEICO.

ORACLE, Seattle, WA

November 2025 - September 2026

Principal Core Infrastructure Engineer - Compute Control Plane

Technical lead for OCI Compute Control Plane architecture and platform modernization.

- Architected an AI-driven alarm and incident analytics framework for OCI Compute that automatically extracts and classifies incident-ticket data, correlates it with alarm signals, and computes a scalable Alarm Value Index to rank alerts by quality, eliminate noisy or dead alarms, and drive org-wide improvements in observability and reliability.
- Drove a cross-organizational initiative to modernize OCI alarm intelligence, extending MQL with statistical anomaly detection, temporal pattern matching, and machine-learning classification. Architected and validated a proof of concept capable of identifying emerging service failures up to 20 minutes before customer impact.
- Led the architectural separation of OCI's GPU Control Plane into a standalone microservice, defining API and data boundaries, workflow semantics, and parity-validation strategy across geo-distributed teams. Enabled the GPU organization to deploy and evolve the service independently.
- Served as technical lead for 11 engineers building OCI Compute Control Plane systems, setting technical direction for reliability, engineering quality, and implementation of large-scale, highly available services and APIs.

TENNESSEE STATE UNIVERSITY, Nashville, TN

July 2025 - December 2025

CodePath in Residence Instructor - Computer Science Department

Teaching and supporting AI-focused curriculum implementation at Tennessee State University for Fall 2025.

- Taught two undergraduate Computer Science courses in Python and Generative AI, combining foundational theory with applied engineering practices to prepare students for real-world software development.

MICROSOFT, Redmond, WA

October 2013 - July 2025

Senior Software Development Engineer - Azure Stream Analytics, Exchange Office365

Technical lead for core platform infrastructure and distributed systems in Azure Stream Analytics.

- Developed a sandboxed JavaScript/C# user-defined function framework, enabling secure customer code execution in production. This system powered over 80% of Stream Analytics jobs (~500,000), processing trillions of events daily.
- Designed SQL Match_Recognize syntax and automata system. Supported TKE MAX elevator platform for more than 600,000 elevators, driving over \$200M in retained revenue and predictive maintenance gains.

- Built geofencing support and R*-Tree indexing, accelerated cross-join performance from $O(n^2)$ to $O(n \log n)$ for real time spatial streaming workloads. Used in NASCAR for real-time and post-race telemetry analysis.
- Mentored 32 senior developers at Grab App during an on-site engagement in Singapore, guiding their transition from a custom in-house platform to Azure Stream Analytics. Delivered a fully cloud-scalable proof-of-concept solution with functional parity to their legacy back-end in two weeks.
- Led four engineers through the initial migration of Azure Stream Analytics from Trill on Service Fabric to Flink on Kubernetes, breaking down the migration into well-defined engineering problems and implementation work following architecture investigation. Delivered a functional POC with feature parity within two months.
- Proactively monitored production system health, engaged directly with high-profile customers and rapidly resolved time-sensitive issues. This hands-on support was instrumental in retaining Fortune 500 clients such as Walmart, TK Elevator, Daimler, American Airlines, Ford, contributing to a 4% year-over-year revenue growth.
- Architected secure CI/CD, release validation, and cross-cloud deployment systems, eliminating language-related production rollbacks and reducing deployment verification from one week with two software engineers to three hours with one service engineer.

MICROSOFT RESEARCH, Aachen/Munich, Germany

August 2010 - September 2013

Research Software Development Engineer II - Windows Embedded, StreamInsight

Research software engineer focused on real-time stream processing, low-latency systems, and edge analytics at the Advanced Technology Labs Europe.

- Developed JStreams, a JavaScript-based, low-latency stream processing engine for edge environments, enabling continuous real-time analysis closer to the data source.

ADDITIONAL RELEVANT EXPERIENCE

MICROSOFT, Redmond, WA

Software Development Engineer in Test I & II - Office Communicator, Windows Meeting Space

EDUCATION

Master of Science (MS) in Computer Science

UNIVERSIDADE FEDERAL DO PARANÁ, Brazil

Bachelor of Science (BS) in Computer Science

UNIVERSIDADE FEDERAL DO PARANÁ, Brazil

COURSE AUTHORING

- **UDACITY - Manage Azure Compute** - Designed and authored Course 1: Manage Azure Compute in Udacity's Azure nanodegree (aligned with AZ-104 certification).