MARIO RODRIGUEZ

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As a dedicated Software Developer with 3+ years of experience, I specialize in creating near real-time streaming applications using Java and the Akka Framework, efficiently processing millions of vehicle messages per second.

SKILLS

Programming Languages: Java, Python, Bash
Data Visualization: Prometheus, Loki, Grafana, Kamon, Cinnamon, Elastic/Kibana
Tools: Akka Framework, Git, GitHub Actions, Azure DevOps, Docker, Kubernetes
Soft Skills: Leadership, Team Collaboration, Effective Communication, Rapid Learning
Languages: English (Fluent), Spanish (Fluent)

WORK EXPERIENCE

Software Developer II, General Motors – Austin, TX March 2024 – Present

- Designed an extensive data pipeline using Akka Streams for real-time data ingestion from Azure Event Hubs, currently capable of consuming all electric vehicle (EV) data from our fleet.
- Developed a robust Trip Stitching logic using Java to accurately form vehicle trips from multiple events, enhancing data accuracy and reliability for downstream analytics. This logic processes event data in real-time and consolidates trip segments for precise vehicle journey representation.
- Build and maintain complex CI/CD pipelines using GitHub Actions, achieving a 99% success rate and reducing deployment time by 30%.
- Implemented Prometheus, Loki and Grafana for monitoring and visualizing pipeline performance and health metrics, ensuring system reliability and quick issue resolution.

Software Developer I, General Motors – Austin, TX February 2021 – March 2024

- Implemented a Digital-Twin Road Network (DTRN) application using Java and Akka for actor-based concurrency, enabling real-time digital representation of vehicles on a map using Elastic/Kibana, capable of processing ~500k messages per second from the vehicles.
- Optimized performance by reducing garbage collection time and decreasing the latency of Akka actors from an average of 1.5 seconds to under 100 milliseconds, significantly enhancing system responsiveness.
- Integrated a BallTree data structure in Java to enhance nearest neighbor searches following latitude/longitude map matching, greatly increasing the accuracy of vehicle location tracking.
- Maintained and debugged a complex Kubernetes cluster of 150 nodes, achieving 99.9% uptime and ensuring rapid resolution of critical production issues, using Kamon and Prometheus for monitoring.

IT Analyst, General Motors – Austin, TX February 2020 – February 2021

- Supported GM's GPSC, CCA, and SAP production environments by resolving 95% of incidents within SLA.
- Repaired computer systems, hardware, and peripherals, leading to a 40% reduction in downtime.
- Provided in-house IT support with an 85%+ resolution rate for technical issues, consistently meeting or exceeding user satisfaction targets.

United States Marine Corps, Camp Pendleton, CA September 2011 – April 2015

- Led a squad of 10+ Marines as a Non-Commissioned Officer (NCO), ensuring effective training, operational readiness, and overall well-being in both combat and non-combat scenarios.
- Maintained accountability for equipment worth over $500,000, ensuring zero loss or damage.
- Trained over 75 junior leaders, enhancing unit readiness and leadership capabilities.

EDUCATION

Bachelor of Science in Computer Science
University of California, Irvine