# José Luis Reséndiz Gutiérrez

**Data & AI Engineer | AWS Certified Solutions Architect | MSc in Applied Data Science**

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## PROFESSIONAL SUMMARY

Data and AI engineer with five-plus years building cloud data platforms in high-stakes environments, from IoT machine data at Caterpillar to banking data lakes at BBVA. AWS Certified Solutions Architect Associate with a master's degree in applied data science. Migrated more than 100 TB of machine data to Amazon S3, built serverless APIs on AWS Lambda, and built an MCP server that lets AI agents query machine data. Strong in data quality, ETL at scale and infrastructure as code.

## TECHNICAL SKILLS

**Languages:** Python, SQL (advanced), Scala, JavaScript

**Cloud:** AWS Lambda, Amazon S3, CloudFormation (IaC), Aurora, Serverless architectures, Firebase

**Data engineering:** ETL / ELT pipelines, Data lakes, Parquet, Apache Spark, Data quality and validation, Snowflake, MySQL, Oracle, Power BI

**Applied AI:** MCP (Model Context Protocol) servers, Generative AI, LLM-based data validation, TensorFlow

**Orchestration and tooling:** Control-M, Git, CI/CD (GitHub Actions), APIs

## PROFESSIONAL EXPERIENCE

**Embedded Product Analytics Engineer, Caterpillar Inc.** Jun 2024 – Present | Monterrey, Mexico

- Migrated more than 100 TB of machine data from on-premise shared drives to Amazon S3: converted files to Parquet, stored their metadata in MySQL and automated the load with Python and AWS services.
- Built an MCP server that lets AI agents query machine data.
- Develop and maintain serverless APIs with AWS Lambda, Python and SQL that give internal systems access to heavy machinery sensor and telemetry data.
- Provision and manage AWS resources consistently with CloudFormation (infrastructure as code).

**Data Engineer, BBVA México** Apr 2023 – Jun 2024 | Mexico City, Mexico

- Configured internal tools to extract, load and transform massive banking data into the corporate data lake, using Scala and Spark for distributed processing.
- Implemented data quality rules with automatic validations and business rules for ingested tables.
- Orchestrated ingestion and quality jobs with Control-M, including schedule design and optimization.
- Built an automated tool that generates technical documentation, cutting preparation time by 80%.

**Data Technician, Bluetab América, an IBM Company** Jun 2022 – Mar 2023 | Mexico City, Mexico

- Implemented ETL flows integrating financial data from multiple sources into the corporate data lake (BBVA project).
- Developed data quality rules for automatic consistency and integrity validation.
- Designed Control-M workflows for interdependent jobs and led onboarding and training for new members of the ingestion team.
- Recognized for the highest development-speed KPI in the area, exceeding productivity metrics by 43%.

**Automation Engineer, Eltecon Soluciones** Sep 2020 – Jun 2022 | Puebla, Mexico

- Built Power BI dashboards for real-time production data and internal web applications with JavaScript, Svelte and Firebase.
- Designed and deployed custom automation for Ford, Tesla and BMW production lines.
- Cut cost by 80% and time by 79% in custom connector manufacturing.

**Mechanical Design Engineer, IDIT Ibero Puebla** Aug 2017 – Aug 2020 | Puebla, Mexico

- Led planning, mechanical design and fabrication of mechatronic prototypes, from concept to production.
- Optimized CNC machining, saving 30% of cost and time, and redesigned AGV tooling, reducing material costs by 20%.

## CERTIFICATIONS

- AWS Certified Solutions Architect – Associate, Amazon Web Services
- Snowflake Hands-On Essentials: Data Warehousing Workshop, Snowflake (Sep 2026)
- TensorFlow Developer Certificate, DeepLearning.AI
- Google Data Analytics Professional Certificate, Google (2021)
- English C1 (130/160), Duolingo English Test

## EDUCATION

**MSc in Applied Data Science**, Universidad IEXE 2022 – 2024

**B.Sc. in Computer Systems Engineering**, UTEL Mexico 2019 – 2022

**B.Sc. in Mechatronics Engineering**, BUAP Puebla 2011 – 2016