

# JAVIER REBULL, M.Sc.

Senior Full Stack Engineer | AI & ML Specialist | Software Architect

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## Summary

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Full stack engineer with 18 years delivering production systems in regulated financial services (credit cards, payments, banking), spanning end-to-end ownership from discovery and technical scoping through system design, build, and production rollout. Hands-on experience deploying machine learning models into production environments, building MLOps pipelines, and leading large-scale platform migrations without critical incidents. Known for aligning executive priorities, engineering teams, risk partners, and external banking institutions around measurable outcomes — and for keeping delivery moving in complex, high-stakes environments.

## Work Experience

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### Sr. Associate Application Development

Mar 2024 – Present

*Santander Bank US*

*Quincy, MA*

- Led the Gravity Middleware Project end to end, migrating from IBM Mainframe/DB2 to private cloud (Microsoft/Oracle) without critical incidents, ensuring seamless operational continuity for production banking systems.
- Established end-to-end MLOps pipelines for automated model deployment and monitoring, driving operational efficiency in production banking environments.
- Directed full stack development for Certificate of Deposits at OpenBank, building user-friendly front-end interfaces and robust back-end services that improved customer engagement.
- Managed the transition of 500+ WAS/WebSphere servers to modern cloud infrastructure, architecting a scalable distributed system for performance and reliability.
- Conducted design and code reviews across engineering teams, codifying best practices in testability and code quality.

### Associate Application Development

Sep 2019 – Feb 2024

*Santander Bank US*

*Quincy, MA*

- Led full stack development on high-pressure, deadline-driven initiatives including the SBNA Loans COVID-19 Relief Program and Regulatory FDIC 370, delivering on time and in compliance.
- Designed and developed UI/UX interfaces for internal banking applications, driving a 35% increase in user satisfaction and engagement.
- Diagnosed and resolved production issues by analyzing root causes across hardware, network, and service layers, improving uptime and performance.
- Maintained stable, incident-free production environments across distributed banking systems.

### Computer Systems Analyst

Apr 2013 – Sep 2019

*Vass IT US*

*Cambridge, MA*

- Developed Computer Vision solutions for document processing and fraud detection, integrating machine learning models into client production systems.
- Managed full stack application development for loan management, leading IT project portfolios and PMO activities across cross-functional, client-facing teams to deliver on time and within budget.
- Oversaw software product development from requirements gathering through deployment and maintenance, ensuring alignment with client business objectives.

### Spec Analytics Analyst 2

Jun 2010 – Apr 2013

*Citibank Banamex*

*Mexico City, Mexico*

- Designed and optimized secure distributed systems for global financial services, processing millions of daily transactions with high availability.
- Developed data-driven algorithms (SAS/Python) that increased marketing response rates by 20% and reduced delinquency by 10%.
- Built interactive dashboards and front-end interfaces for executive reporting and real-time data visualization.

### Sr. Programmer

Aug 2007 – May 2010

*Accenture*

*Mexico City, Mexico*

- Developed and maintained large-scale core financial systems (COBOL, Java) for client banks BBVA Bancomer and Santander México, with zero critical incidents.
- Designed front-end user interfaces for mainframe applications, improving operational efficiency and developer experience.

## Education

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### M.Sc. in Applied Artificial Intelligence

*Tecnológico de Monterrey (ITESM)*

**2024 – 2026 • Degree conferred**

*Mexico City, Mexico*

GPA: 4.0/4.0 • Coursework: Data Science, Machine Learning, AI, Data Visualization, Fintech & IoT

### M.S. in Artificial Intelligence and Data Analytics

*Universidad Autónoma de Ciudad Juárez (UACJ)*

**2025 – 2027 (Expected)**

*Ciudad Juárez, Mexico*

Focus: Smart Optimization, Linear Optimization, Non-Linear Optimization, Data Engineering

### B.S. in Computer Science & Electronics Engineering

*The National Polytechnic Institute of Mexico (ESCOM IPN)*

**2002 – 2006**

*Mexico City, Mexico*

GPA: 3.28/4.0 • Coursework: Programming, Software Engineering, AI, Computer Networks, Data Structures, Algorithms & Operating Systems

## AI / ML Projects

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- **EpiForecast-MX — Epidemiological Forecasting Platform** (2025–2026): M.Sc. capstone at Tecnológico de Monterrey, built with the Instituto Mexicano del Seguro Social (IMSS). Forecasts weekly disease incidence across Mexico's 32 federal entities on a 52-week horizon, training Prophet, DeepAR, Ensemble and Stacking engines per series and selecting one through an auditable rule that is revised against each new national epidemiological bulletin. In production at [epiforecast.mx](https://epiforecast.mx).
- **Text Classification with RNNs — AG NEWS Dataset** (Mar 2025): Built an RNN in PyTorch to classify AG NEWS articles, covering data preprocessing, model architecture design, training pipelines, and evaluation.
- **Multilayer Fully Connected Network in NumPy** (Jan 2025): Implemented a neural network from scratch for ASL letter recognition, including forward/backward propagation and performance benchmarking.
- **Stock Price Prediction for Apple** (Nov 2024): Developed and compared LSTM, ARIMA, Prophet, and Naïve predictive models on historical market data using advanced statistical methods.
- **IoT for Sustainable Urban Development** (Feb 2025): Investigated IoT solutions for traffic congestion in Boston and public lighting efficiency in Mexico City using distributed sensor networks.

## Conference Presentations

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- **CALASS 2026 — Congrès de l'ALASS**, Université de Montréal, Canada (Aug 27–29, 2026): Presenting EpiForecast-MX, an epidemiological intelligence platform developed at Tecnológico de Monterrey with the Instituto Mexicano del Seguro Social (IMSS). Details at [rebull.org/alass26](https://rebull.org/alass26).

## Publications

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- **Forecasting Dengue in Mexico: An End-to-End Data Science Story** — Medium. End-to-end data science article covering the full workflow for forecasting dengue cases in Mexico.

## Training & Certifications

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AWS Certified AI Practitioner (Dec 2025) • AWS Certified Cloud Practitioner (Jan 2025) • Scrum Master Professional — SMPC® (Jun 2025) • Generative AI in Action — IBM SkillsBuild (Jun 2025) • Lifelong Learning — Certiprof (Jan 2026) • Python Essentials 1 & 2 — Cisco (Jul 2026)