

Henrique Laureano

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Data Scientist | AI Engineer | Statistician | M.Sc. in Statistics and Numerical Methods in Engineering

Professional Summary

Senior AI Engineer and Statistician with over a decade of experience bridging advanced mathematical theory with enterprise-scale engineering. Expert in architecting agentic AI systems (RAG, LangGraph) and leading high-dimensional forecasting for global finance and automotive leaders (EBANX, Volvo). PhD-level specialist in Bayesian modeling, dedicated to transforming complex data into multi-million dollar cost optimizations and automated decision-making frameworks.

Experience

EBANX – Curitiba-PR, Brazil

AI Engineer Specialist: Forecasting & Agentic AI

[Dec 2025 - Present]

Data Science Specialist

[May 2025 - Dec 2025]

- Architecting agentic AI systems for Finance on GCP. Implementing **RAG** and **Text-to-SQL** using **ADK** and **LangChain** to drive enterprise automation and decision-making.
- Leading high-dimensional KPI forecasting (Volume, Revenue, Costs, Gross Profit) utilizing a hybrid approach of **Transformers**, **LSTMs**, Ensemble methods, and **Probabilistic/Kernel models**.

Tech Stack: Languages: Python, SQL, PySpark. **Cloud:** GCP (Vertex AI, Vector Search, BigQuery) and AWS (SageMaker, EMR, Lambda, Step Functions). **AI/ML:** ADK, LangChain, PyTorch, Stan. **DevOps:** GitHub Actions, Sonar.

Senior Data Scientist: Credit Risk Modeling, Banco Bradesco – Curitiba-PR, Brazil

[Mar 2025 - Apr 2025]

- Developed, validated, and monitored massified credit risk models for large-scale retail banking.

Tech Stack: Languages: Python, R, SAS, PySpark. **Cloud/Infrastructure:** **On-premises** (Hive, Hadoop), Databricks, MLFlow. **AI/ML:** PyTorch. **DevOps:** GitHub Actions, Bitbucket.

Senior Data Scientist: Advanced Analytics, Volvo Trucks Latin America – Curitiba-PR, Brazil [Oct 2022 - Feb 2025]

- **Market Forecasting:** Optimized short/long-term volume forecasts for Chile and Peru using **Bayesian GAMMs**, increasing accuracy by 10% and reducing error rates to <5%.
- **Telemetry Modeling:** Achieved six-digit monthly cost reductions in service contract corrective expenses through the modeling of high-frequency telemetry data.
- **Pricing Optimization:** Re-engineered the pricing matrix for "Gold Service" contracts, driving a 5% sales increase and a 10% reduction in customer churn.
- **Financial Planning:** Delivered seven-digit annual savings (9% reduction) through the development of automated S&A expense forecasting for LATAM HQ.

Tech Stack: Languages: Python, R, SQL, PySpark. **Cloud/Infrastructure:** **On-premises** (SQL, Hadoop), Databricks, MLFlow. **AI/ML:** PyTorch, Stan, INLA. **DevOps:** GitHub Actions.

Senior Statistician, Pelé Pequeno Príncipe Research Institute – Curitiba-PR, Brazil

[May 2021 – Sep 2022]

- Conducted research for the largest pediatric hospital in Latin America, focusing on complex infectious and oncogenic diseases.
- Led data visualization, sampling design, and predictive modeling for clinical studies and bioinformatics applications.

Tech Stack: Languages: Python, R, SQL. **Cloud/Infrastructure:** On-premises (SQL), Linux. **AI/ML:** PyTorch, JAX, Stan, INLA. **DevOps:** GitHub Actions.

Statistical Consultant, Freelance Statistical Consulting

[Jan 2014 – Sep 2022]

- Provided end-to-end statistical support for over 20 master's and PhD theses.
- **Diverse Field Expertise:** Agronomy, Biology, Economics, Nursing, Electrical and Chemical Engineering, Pharmacy, Education, Psychology, Chemistry, Medicine, and Zootechnics.
- **Core Focus:** Translating complex research questions into robust probabilistic frameworks, including data cleaning, hypothesis testing, and advanced modeling in **R and Python**.

Tech Stack: Languages: Python, R. **AI/ML:** PyTorch, Stan, INLA. **DevOps:** GitHub Actions.

Statistician, Telehealth Center – Hospital das Clínicas (UFMG) – Belo Horizonte-MG, Brazil [Jul 2016 – Dec 2016]

- Analyzed echocardiographic data for tropical diseases, developing predictive models for Chagas and rheumatic diseases.
- Led the transition of data analysis platforms from **SPSS to R**, incorporating advanced techniques such as **competing risks and multi-state survival models**.
- Concluded role to pursue an MSc in Statistics at UNICAMP.

Education

Masters in Statistics and Numerical Methods in Engineering, Universidade Federal do Paraná (UFPR) [2021]

Interrupted PhD in Applied Mathematics and Computational Sciences (AMCS),

King Abdullah University of Science and Technology (KAUST)

[2019]

Interrupted Masters in Statistics, Universidade Estadual de Campinas (UNICAMP) [2017]

Bachelor in Statistics, Universidade Federal do Paraná (UFPR)

[2016]

Publications & Research

- **Peer-Reviewed Research:** Published **16 scientific papers** in international journals covering diverse fields such as Statistics, Medicine, and Engineering.
- **Google Scholar Profile:** [Full Publication List & Citations](#).

Licenses & Certifications

- **Certified SAFe® Product Owner / Product Manager**, Issued by Scaled Agile, Inc. (2023).