Gabriel Bromonschenkel

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Professional Experience

- **Banco do Brasil (via Stefanini)** — Brasília, DF
  Data Scientist — *Apr 2023 – Present*
  - Developed a People Analytics clustering model for talent discovery; identified 300+ high-potential employees for IT roles, enabling the department to double its available positions.
  - Engineered an end-to-end OCR pipeline for fraud detection using Tesseract and NLP similarity scoring, increasing audit coverage by 15% and preventing millions in potential fines.
  - Architected a Recommendation System using Spark ML (ALS); migrated from SVD-based models to handle large-scale enterprise data volume.
  - Applying Causal Inference and Multi-Arm Bandits for debt renegotiation experiments, optimizing discount levels to increase final capital recovery.

- **Tok&Stok** — São Paulo, SP
  Data Scientist — *Jun 2022 – Mar 2023*
  - Improved a Slack bot for Anomaly Detection and Power BI automation, reducing business complaints by 30% and lowering software costs by centralizing premium license usage.
  - Integrated CI/CD for BI via GitHub Actions, enabling versioning and automated rollbacks for 75% of company reports.
  - Managed Data Marts in Azure Analysis Services, ensuring >90% data integrity during a complex business transition through custom DBT and SQL adaptations.

Research Experience

- **Imaging, Vision and AI Laboratory (LIVIA)** — Montreal, QC
  Visiting Researcher — *Sep 2025 – Oct 2025*
  - Researched Vision-Language Models (VLMs) for Image Captioning at the École de Technologie Supérieure (ÉTS), Université du Québec; conducted comparative evaluations of Transformer-based models; investigated the efficacy of unimodal and multimodal metrics.
  - Optimized 7B+ parameter models for GPU memory using LoRA, QLoRA, and 4-bit Quantization.

- **Computational Intelligence Laboratory (LAICSI)** — Serra, ES
  AI Research Assistant — *Sep 2023 – Dec 2025*
  - Lead researcher on Multimodal Models for Brazilian Portuguese; pioneered studies on translation effects over Vision Encoder-Decoder (VED) models and Large VLMs like Llama and Phi-3 for Vision.

- **University of Sao Paulo (USP)** — São Paulo, SP
  AI Research Assistant — *Jul 2020 – Dec 2021*
  - Researched hybrid methods applying Machine Learning and Ontologies for psychiatric clinical analysis, using Scikit-Learn and Unified Foundation Ontology (UFO).

- **Federal University of Espírito Santo (UFES)** — São Mateus, ES
  AI Research Assistant — *Aug 2019 – Aug 2021*
  - Researched Smart Grid Load Identification and facial recognition using CNNs and Extreme Learning Machines (ELM), using Tensorflow, MongoDB and Databricks.

Education

- **Federal Institute of Espírito Santo (IFES)** — Serra, ES
  M.Sc. in Computer Science (Applied Computing) — *2023 – 2025*

- **Federal University of Espírito Santo (UFES)** — São Mateus, ES
  B.Sc. in Computer Engineering — *2017 – 2022*

Technical Skills

ML & AI: VLM, LLM, NLP, CV, Transformers (ViT, Swin, BERT, GPT), Causal Inference, Bandit Algorithms.
Big Data: PySpark, Hadoop, Hive, Hue, Spark MLlib, Databricks, Snowflake, DBT.
Tools: AWS, Azure, Python, SQL, Terraform, Docker, Kubernetes, GitHub Actions.