

Rafaela Souza Pinter

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Rafaela Souza Pinter is a Computer Science master student at Université de Montréal. With an engineering background, she has developed strong problem-solving skills and an optimization mindset. Nowadays, she is focused on building a career in Machine Learning Operations, where she applies her discipline and dedication to study and solve complex challenges to develop efficient machine learning applications.

EDUCATION

Master of Science in Computer Science
Université de Montréal, Montréal – Canada

09/23 – 08/25
Current Grade: 3.95/4.3

Specialization in Data Science & Big Data
Universidade Federal do Paraná (UFPR), Curitiba – Brazil

02/21 - 07/22
Final grade: 9.9/10

Bachelor Degree in Biological Engineering and Biotechnology
Universidade Federal do Paraná (UFPR), Curitiba – Brazil

02/15 - 08/20
Final grade: 8.7/10

SKILLS

Languages:

- Native Portuguese, Fluent English, Fluent French, Basic German

Programming languages and Query Languages:

- Python, SQL (BigQuery, PostgreSQL, MySQL), R, and notions of bash, HTML/CSS, C/C++, Java, and Javascript

Frameworks and Tools:

- Machine Learning Frameworks: Pytorch, Keras, Scikit-learn, Numpy, Pandas, XGBoost, CatBoost, Pyomo, SpaCy, NLTK, Hugging Face Transformers, Optuna, basic notions of Spark
- Pipelines: Kedro, basic Kubeflow
- Containerization: Docker
- Model Serving: BentoML, Plumber, Flask
- CI/CD Tools: GitHub Actions, Bitbucket Pipelines
- Experiment Tracking and Model Management: MLflow, comet ML

Cloud:

- Google Cloud Platform (Vertex AI, Cloud Run, Cloud Build, Container Registry, Cloud Storage, BigQuery, App Engine)

EXPERIENCES

Co-operators – Montreal, QC – Canada

Master Intern (05/2024 – 12/2024)

- Partnered with data scientists to develop APIs for deploying Machine Learning models into production.
- The master's project focuses on enhancing the company's MLOps maturity by assessing needs, identifying pain points, and designing an architecture to optimize the process.

Falconi Consulting – São Paulo, SP – Brazil

Machine Learning Engineer (11/2022 – 08/2023)

- Developed a Machine Learning pipeline template with MLOps principles incorporating a Kedro pipeline, MLFlow and a CI/CD pipeline for seamless deployment on GCP's Vertex AI, resulting in reduction in productization time for machine learning projects from months to days.
- Created a highly accurate CatBoost model for predicting delivery fees, achieving an annual MAPE of 14% and a trimester MAPE of 3%.
- Conducted data analysis of fuel resale prices for a major distributor in Brazil, identifying potential opportunities worth 40 Mi Reais.
- Constructed a MLOps pipeline to automate the deployment of MLflow server, Streamlit, and Plotly Dash applications on GCP's App Engine.

- Defined and implemented DevOps best practices for a team of 12 data scientists, facilitating efficient collaboration and seamless integration of development and operations.
- Provided guidance and expertise to a team of six data scientists in cloud development, leveraging various tools and services such as Cloud Storage, BigQuery, Vertex AI Workbench, Vertex AI Pipelines, App Engine, and Cloud Run.

DP6 – São Paulo, SP – Brazil

Data Scientist (08/2021 – 11/2022)

- Developed an end-to-end Marketing Mix Model (Robyn, LightweightMMM) to provide comprehensive insights into marketing effectiveness and optimize resource allocation.
- Automated the retraining of a BigQuery ML Time-series Forecasting (ARIMA) model to accurately predict transaction volumes during the Black Friday week, enhancing sales forecasting capabilities.
- Designed and implemented an ETL flow between Smartsheet's API and GCP, leveraging Cloud Function to store HR data in BigQuery. Conducted analysis on over 1600 recruitment processes using NLP techniques such as TF-IDF and word2vec. Identified common characteristics among successfully hired candidates, enabling more informed HR evaluations.
- Utilized the Marketing-Attribution-Models framework for multi-touch attribution, enabling a comprehensive understanding of marketing campaign effectiveness.
- Successfully deployed a Next Best Offer XGBoost recommender model to over 3 million clients using Gitlab and GCP's AIPlatform. Incorporated MLOps and CI/CD pipelines on VertexAI to ensure seamless model deployment and updates.
- Implemented a budget optimization algorithm in Python, utilizing nonlinear optimization techniques (Pyomo, Scipy) to reallocate marketing budget effectively and optimize ROI.

Radar Saúde – São José, SC – Brazil

Data Analyst (12/2020 – 07/2021)

- Ensured data quality for the company's web application by validating every SQL query before production deployment.
- Implemented a powerful NLP algorithm to automate the identification of duplicated records within the Data Warehouse tables, significantly improving data accuracy and integrity.
- Enhanced the functionality and usability of Power BI dashboards utilized by the Brazilian Public Health System (SUS), enabling more effective data visualization and analysis.
- Developed an interactive dashboard using R Shiny App for women's health, offering comprehensive insights into pregnancy monitoring, breast and cervical cancer screenings, and HPV vaccine administration. This dashboard served as a valuable tool for healthcare professionals and stakeholders.

Levteck Tecnologia Viva – Florianópolis, SC – Brazil

Student Intern, Laboratory Technician (03/2020 – 11/2020)

- Designed and structured an SQLite database, leveraging Python for data analysis, to investigate the impact of fermentative parameters on cell yield and bioreactor contamination.
- Conducted a comprehensive study on contamination patterns, successfully identifying the source of bioreactor contamination through thorough analysis and investigation.

VOLUNTEER WORK

Mulheres em Dados (Women in Data), Brazil

Volunteer Mentor (08/2022 – 12/2022)

- Shared experiences and mentored women in the process of career transition to Data Science.

Colégio Estadual Padre Claudio Morelli, Curitiba-PR – Brazil

Volunteer Teacher (08/2017 – 11/2017)

- Created the extension project "Future Freshmen". Teacher of tutoring in mathematics, physics, and chemistry for senior students of a public high school.