

# Viviane Alves de Oliveira

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## SUMMARY

AI Engineer with a strong software engineering background and hands-on experience building **end-to-end AI systems** across healthcare, audio, and NLP. Proven success in training and deploying **2D/3D CNNs**, audio classification models, and transformer-based NLP solutions, as well as designing **scalable APIs and ML pipelines**. Experienced with **TensorFlow, PyTorch, TensorFlow Lite, FastAPI, and GCP**, with a strong focus on production readiness, performance optimization, and ethical AI. Seeking AI Engineer roles where applied AI delivers real-world impact.

## PROFESSIONAL EXPERIENCE

### Artificial Intelligence Engineer

Freelancer

2025 – Present

Montreal, Canada

#### Lisnen (Toronto, Canada) – Sound Recognition (08/2025 – 12/2025)

- Designed and trained audio classification models for sound recognition using **CNN-based architectures** and **pretrained audio embeddings (YAMNet, PANNs)** with **TensorFlow / Keras**.
- Built audio preprocessing and augmentation pipelines using **Librosa** and **Audiomentations** (noise injection, pitch shifting, time stretching) to improve model robustness in real-world environments.
- Optimized inference pipelines for deployment by converting models to **TensorFlow Lite (TFLite)** and tuning inference parameters for **real-time / edge inference**, reducing latency while maintaining high accuracy.

#### Revelo (USA) – Full Trace / ML Pipeline (04/2025 – 09/2025)

- Developed **end-to-end ML pipelines** covering **data ingestion, preprocessing, feature engineering, model training, evaluation, and deployment** for traceability and analytics use cases.

#### Angelina (Fiverr, USA) – Sentiment Analysis (01/2025 – 02/2025)

- Built sentiment analysis models using **NLP techniques** and transformer-based models (**BERT/GPT**-style embeddings).
- Cleaned and processed unstructured text data, handling noisy and imbalanced datasets.
- Delivered **production-ready inference pipelines** and documented results for non-technical stakeholders.

### Machine Learning Engineer (Intern)

BrainInnov

2025 – 2025

Montreal, Canada

- Trained 3D CNN models (DenseNet, ResNet, Attention Mechanism variants) with **PyTorch**, optimizing learning rates using Optuna and addressing gradient instability.
- Improved evaluation through F1 score, precision-recall metrics, and visual interpretability (Grad-CAM).
- Applied class-aware data augmentation (on-the-fly and pre-saved hybrid) to manage memory and balance datasets.
- Built a preprocessing pipeline for DICOM-based 3D CT scans using **SimpleITK** and **Monai** library, supporting volume normalization, augmentation, and class balancing.

### Python Developer

Globant

2022 – 2023

Brasilia, Brazil

- Designed and maintained ETL pipelines using **Python, Jupyter Notebooks, and Azure Data Factory**, automating data ingestion and transformation.
- Worked with **AWS Glue, Athena, and S3** to manage data lakes and deliver clean datasets for analytics teams.
- Mentored team members, reviewed code, and maintained documentation to ensure cross-team alignment on international projects.

### Software Developer (Full Stack)

Radix Engineering and Software

2021 – 2022

Brasilia, Brazil

- Built an inventory monitoring application from scratch using **Python (Flask), jQuery, and Databricks**, improving inventory visibility for retail clients.

- Processed large-scale data with **PySpark**, integrating business rules into data transformation pipelines.
- Ensured application scalability and performance through continuous integration and testing.

## AI BackEnd Software Developer

Portal Telemedicine

2020 – 2021

Brasilia, Brazil

- Delivered AI diagnostic outputs to doctors by integrating containerized microservices using **Python, Django, Docker, and Kubernetes**, improving availability and system resilience.
- Built and deployed REST APIs to transfer AI-generated heatmaps to the frontend, using **Django REST Framework and JavaScript (Vue.js)**.
- Used **Google Cloud Platform (BigQuery, Data Fusion, Cloud Storage, Looker)** to create dashboards, monitor file uploads, and build automated pipelines.
- Collaborated with the AI team to expose model outputs, working closely with **C# and containerized AI modules**, ensuring smooth cross-service communication.
- Managed Git workflows and code reviews using **Git, Bitbucket**, and practiced Agile methodology for continuous delivery.

## Full Stack Developer (Python)

Softplan

2013 – 2020

Brasilia, Brazil

- Developed a Django-based web application to manage court processes, using **Python, Django, PostgreSQL**, and deployed to **Heroku**, streamlining case assignments by court and prosecutor.
- Contributed to the project lifecycle from design to deployment, gaining strong backend and DevOps experience.
- Maintained legacy systems and transitioned to newer tools as the company scaled its digital infrastructure.

## EDUCATION

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### AEC – Artificial Intelligence and Machine Learning

LaSalle College

2023 – 2025

Montreal, Canada

### MBA in Information Technology Governance

University Center ICESP

2010 – 2011

Brasilia, Brazil

### Degree in Data Processing Technician

Union Education of Brasilia - UNEB

2007 – 2010

Brasilia, Brazil

## SKILLS & KNOWLEDGE

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- Languages:** Python, JavaScript, SQL
- Frameworks & Libraries:** Flask, Django, Django REST Framework, FastAPI, Scikit-Learn, TensorFlow, PyTorch,
- Machine Learning:** CNNs, Neural Networks, NLP, LLMs (BERT, GPT)
- Backend Development:** API Development, Microservices, Docker, Streamlit
- Testing & QA:** Unit Testing, PyTest
- Databases:** PostgreSQL, MySQL, MongoDB, Firebase
- Data & Visualization:** ETL, Data Pipelines, Matplotlib, Plotly
- Tools:** Git, GitFlow, Jupyter Notebooks, Anaconda

### Personal Skills:

- Collaborative problem-solver with a passion for innovation.
- Skilled communicator, capable of simplifying complex concepts for diverse audiences.
- Detail-oriented with a commitment to ethical, data-driven decision-making.

**Languages Skills:** Intermediate in progress: French      Advanced: English      Native: Portuguese

**Certifications:** ITIL v3 – Foundation July/2015 – EXIN – The global independent certification institute