

# Viviane Alves de Oliveira

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## SUMMARY

Python Developer with experience in software engineering and a deep focus on AI/ML solutions, especially in healthcare. Proven success in designing scalable APIs, training 2D/3D CNNs for medical imaging, building robust data pipelines, and deploying models using tools like TensorFlow, PyTorch, FastAPI, and GCP. Passionate about ethical AI and continuous learning, currently seeking roles where innovation meets real-world impact.

## PROFESSIONAL EXPERIENCE

### 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

<b>AEC – Artificial Intelligence and Machine Learning</b> LaSalle College	2023 – 2025 Montreal, Canada
<b>MBA in Information Technology Governance</b> University Center ICESP	2010 – 2011 Brasilia, Brazil
<b>Degree in Data Processing Technician</b> Union Education of Brasilia - UNEB	2007 – 2010 Brasilia, Brazil

## SKILLS & KNOWLEDGE

- **Languages:** Python, JavaScript, SQL
- **Frameworks & Libraries:** Flask, Django, Django REST Framework, FastAPI, Scikit-Learn, TensorFlow, PyTorch, Pandas, NumPy
- **Machine Learning:** CNNs, Neural Networks, NLP, LLMs (BERT, GPT)
- **Backend Development:** API Development, Microservices, Docker, Streamlit
- **Testing & QA:** Unit Testing, PyTest
- **Cloud & DevOps:** Google Cloud Platform (BigQuery, Cloud Storage, Data Fusion)
- **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

## PROJECTS

<b>3D Lung Nodule Classification with LIDC Dataset.</b>	2025
<ul style="list-style-type: none"><li>• Developed a full preprocessing pipeline for the LIDC-IDRI dataset, including DICOM filtering, variance-based volume cleaning, 3D augmentation, and normalization.</li></ul>	
<b>2D Breast Cancer Image Classification with CNN Architectures</b>	2024
<ul style="list-style-type: none"><li>• Built an end-to-end breast cancer detection pipeline using labeled mammogram images categorized by tissue density and malignancy.</li></ul>	