

Alexandre S. Pereira

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SUMMARY

ML engineer and researcher with experience spanning full-stack product development, computer vision, and computational immunology. Currently pursuing a B.S. in Artificial Intelligence while leading deep learning research and building production-grade AI systems.

EDUCATION

- **UniLasalle Canoas** Canoas, RS
B.S. in Artificial Intelligence 2025 – Present
- **UniLasalle Canoas** Canoas, RS
B.S. in Computer Science (transferred to AI program) 2020 – 2023
- **CCAA** Brazil
Advanced English – Complete 2019

RESEARCH

- **EXP-C Bioinformatics Scholarship, UniLasalle** Canoas, RS
Research Fellow Sep 2025 – Present
 - **Immunology Research:** Developing software for pMHC modeling and deep learning-based prediction of immune response, building on prior structural work in DockTope (Menegatti Rigo et al., *Scientific Reports*, 2015).
- **Núcleo de Inteligência Artificial (NIA), UniLasalle** Canoas, RS
Research Lead and Tutor Jan 2025 – Present
 - **Medical Computer Vision:** Leading research on diabetic ulcer characterization using state-of-the-art deep learning techniques in PyTorch.
 - **Teaching:** Tutoring undergraduate students in neural networks and deep learning fundamentals.

EXPERIENCE

- **Jurisoft – Legal Software** Remote
Machine Learning & Full Stack Developer 2024 – Present
 - **Recommendation Systems:** Developed recommendation systems for legal document analysis.
 - **Generative Marketing:** Built generative AI solutions for automated marketing content creation.
 - **LLM Integration:** Integrated Large Language Models into production applications for legal text processing.
 - **Full Stack Development:** End-to-end development of web applications for legal professionals.
 - **Tech Stack:** React, Next.js, PyTorch
- **SMTX – Real Estate CRM Solutions** Brazil
Tech Lead 2019 – 2023
 - **Architecture:** Designed and implemented the complete initial architecture of the company's platform.
 - **Team Leadership:** Led and mentored a team of developers, establishing best practices and technical standards.
 - **Large Scale Data:** Worked with large-scale data processing for clients including RE/MAX Brasil.
 - **Computer Vision & Deep Learning:** Implemented computer vision and deep learning solutions for real estate applications.
 - **Tech Stack:** PyTorch, React, Node.js, Firebase

PROJECTS

- **SimpleCTM:** PyTorch implementation of the Continuous Thought Machines architecture from Sakana AI research.
- **Perceiver:** PyTorch implementation of DeepMind's Perceiver architecture for general-purpose perception.
- **TRM for Genome Classification (OpenGenome):** Transformer-based model for genome sequence classification.

SKILLS

- **Proficient:** Python, TypeScript, PyTorch, React, Next.js
- **Comfortable:** Tailwind, GCP, AWS, Supabase, JAX, TensorFlow, MLFlow, SQL, NoSQL, Vector Databases, Modal, Runpod