Caio Petrucci dos Santos Rosa

CONTACT INFORMATION	Email: caiopetruccirosa https://www.linkedin.com/in/caiopetruccirosa Phone: +55 19 99302-1717 https://github.com/caiopetruccirosa

EDUCATION

University of Campinas (UNICAMP)
B.S. in Computer Science — GPA 8.78/10.00   **Mar 2021 – Present**

Peking University (PKU)
General Visiting Student   **Feb 2025 – Jul 2025**
- Took "Empirical Methods for Natural Language Processing" undergraduate-level course by Prof. Yansong Feng and "Deep Reinforcement Learning" graduate-level course by Prof. Zongqing Lu.
- Studied Chinese (Standard Mandarin) at the School of Chinese as a Second Language.

Technical High School of Campinas (COTUCA)
Technician in Information Technology   **Feb 2017 – Dec 2019**

ACADEMIC EXPERIENCE

Recod.ai | University of Campinas (UNICAMP)
Undergraduate Student Researcher *(full-time)*   **Apr 2024 – Present**
- Developing a zero-shot learning for facial age estimation on children's images (proxy task for CSAM detection), using methods such as ALE and DeViSE to avoid CLIP-based pretrained models. This research project is funded by a FAPESP scholarship. Advised by Prof. Sandra Avila.

H.IAAC | University of Campinas (UNICAMP)
Undergraduate Student Researcher *(part-time)*   **Oct 2022 – Nov 2023**
- Worked on Generative Adversarial Networks (GANs) applied to synthesizing human GPS trajectories. Supervised by Prof. Paula Dornhofer Paro Costa.

Federal University of ABC (UFABC)
Research Assistant Intern *(voluntary)*   **Jun 2017 – Jul 2017**
- Studied iterative optimization algorithms, such as Particle Swarm Optimization (PSO) and Hill Climbing method. Supervised by Prof. Ricardo Suyama.

PROFESSIONAL EXPERIENCE

NeuralMind
Machine Learning Engineer *(internship)*   **Dec 2023 – Apr 2024**
- Developed RAG-based chatbots using LangChain, improving QA accuracy on production datasets.
- Built a chatbot guardrails Python library to ensuring safety and reliability on chatbot services.

iFood
Software Engineer *(full-time)*   **Jan 2021 – Jun 2022**
- Worked on an engineering task force which rewrote critical backend web applications from Python to Go, which resulted in reducing computating resources by 20x and API latency by 5x.
- Developed the Server-Driven UI platform, which enabled product managers to create dynamic content pages and perform A/B testing.
- Composed a working group that developed two internal Go libraries - a standardized logger and an Apache Kafka client -, and a standard/template for Go projects of backend web applications.

Software Engineer Intern *(internship)*   **Jan 2020 – Dec 2020**
- Worked on the Search team, developing large-scale backend web applications responsible for providing the iFood search APIs.
- Implemented the first semantic search API based on *word2vec*-based models, improving retrieval quality and latency.

Unicamp Development Foundation (FUNCAMP)
Software Developer *(contract)*   **Jul 2019 – Dec 2019**
- Developed an Augmented Reality mobile app for *The Unicamp Publishing House* based on Unity.

VOLUNTEER EXPERIENCE

Iris Data Science UNICAMP	**MaratonIC UNICAMP**
Member & President Mar 2024 - Feb 2025	**Member** Oct 2023 - Feb 2025

TECHNICAL SKILLS

Programming	Python; Go;	**Other**	PyTorch; PyTorch Lightning; JAX;
Languages:	Kotlin; Java.	**tools:**	Kubernetes; Linux & Unix systems.

LANGUAGES

Portuguese: Native; **English**: Fluent; **Standard Mandarin**: Beginner. **Spanish**: Beginner.

ACHIEVEMENTS/ HONOURS

Global Nominee at **NASA Space Apps Challenge 2024**
Placed at **36 out of 687 teams** at the **2023 ICPC Latin America Regional**