

JOÃO G. M. ARAÚJO

✉ joaoguilhermearujo@gmail.com

☎ +55 85 99766 4207

🌐 github.com/joaogui1

🌐 joaogui1.netlify.app

🌐 linkedin.com/in/joaogui1

EDUCATION

Bachelor in Computer Science

University of São Paulo

📅 Jan 2018 – Jan 2023

📍 São Carlos, BR

- GPA: 9.5/10.0, Ranked 1st out of 118.

WORK EXPERIENCE

Machine Learning Engineer

📅 Feb 2021 - Present

📍 Cohere

- Implemented over 10 papers with improvements to our embeddings model and evaluated their real performance and trade-offs
- Championed and prototyped the creation of a new jax-based framework that improved our training speed by 7x
- Implemented Masked Language Modelling and Classification models in this new framework

PUBLICATIONS

- CleanRL: High-quality Single-file Implementations of Deep Reinforcement Learning Algorithms - JMLR Open Source
- Scalable Training of Language Models using JAX pjit and TPUv4 - Arxiv
- Lifting the Veil on Hyper-parameters for Value-based Deep Reinforcement Learning - RLDM: The Multi-disciplinary Conference on Reinforcement Learning and Decision Making
- No News is Good News: A Critique of the One Billion Word Benchmark - Neurips Data-Centric Ai Workshop 2021
- Mitigating harm in language models with conditional-likelihood filtration - Arxiv

RESEARCH

Research Internship

📅 Dec 2019 - Feb 2020

📍 University of Tsukuba

- Researched Neural Architecture Search to design soft robots
- Implemented a novel OpenAI gym environment for the softbot morphology design task
- Implemented different Neuro Evolution methods, analysing both the designed soft robots and the evolved network topologies

Deep Learning Research

📅 Mar 2019 - July 2020

📍 University of São Paulo

- Undergraduate Research with funding from FAPESP, one of the most prestigious scholarships in Brazil
- Generated stochastic images to fool Inception and ResNet
- Studied the fused Representation Space of Neural Networks, combining latent spaces and semantic vectors

PROJECTS

Brazilian Deep Learning Course

📅 July 2020 - Present

📍 Youtube

- Creating the first free, Online-oriented, Deep Learning Course in Brazil
- Using the most updated research on why and how Deep Learning components work
- Starting from simple Linear Regression and going all the way to Attention and Transformers

Open Source Contributions

📅 Aug 2019 - Present

📍 Github

- Merged more than 40 pull requests
- Contributed with new code, bug fixes and documentations to Tensor2Tensor, JAX, Flax, Rlax, Haiku and Optax

Data: Data Science Study Group

📅 Mar 2019 - Dec 2021

📍 University of São Paulo

- Leading the Deep Learning Study Group where we discuss Deep Learning papers and have group study sessions of famous courses
- Organized and taught classes in an "Introduction to Data Science" course to more than 100 students

AWARDS & EVENTS

- **Khipu AI (2023, Uruguay):** Helped organize and served as tutor for 3 tutorials in the second in-person edition
- **Neurips 2022 Workshop on Broadening Research Collaborations:** Co-organizer of the workshop
- **Categories for AI:** Co-organizer of the lecture series introducing Category Theory for Deep Learning Researchers, with over 1500 sign-ups
- **Deep Learning Indaba, 2022, Tunis - TUN:** Tutores the JAX and Bayesian Neural Network sessions
- **Cambridge ELLIS Machine Learning Summer School, 2022, Cambridge - UK:** Invited to attend the international summer school.
- **CIFAR Deep Learning and Reinforcement Learning Summer School (2021, 2022, Online):** Invited for 2 consecutive years to attend the international summer school.
- **NeurIPS (2020, 2021, Virtual):** Attended the Conference on Neural Information Processing Systems
- **ICML (2020, 2021, Virtual):** Attended the International Conference on Machine Learning
- **Khipu AI (2019, Uruguay):** Invited to participate in the first edition of the largest Artificial Intelligence conference in Latin America
- **IOI (2018, Japan):** Represented Brazil with other 3 students at the international Olympiad in Informatics, a competition with 335 students from 84 countries
- **Scientific Olympiads (Brazil):** More than 30 medals in Scientific Olympiads between 2011 and 2017, including 3 gold medals in Mathematics and 2 in Computer Science and 2 in Physics.