JOÃO PEDRO VASCONCELOS

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Languages   Native Portuguese, Fluent English, Intermediate Spanish and learning French.

Github : jpvt   **Linkedin** : in/jpvt

EXPERIENCE

Software Engineering Intern - Rei do Pitaco   05/2022 - 11/2022
Rei do Pitaco is the first trustworthy Brazilian Daily Fantasy Sports mobile app and recently raised Series A. Worked in the Data Platform team, building data extraction pipelines using Apache Airflow.

Software Development Engineer Intern - Amazon   10/2021 - 05/2022
Collaborated on the Fulfillment by Amazon Organization on a team focused on Tax Services. My internship involved creating dashboards to monitor the SLAs from the team's microservices and implementing a data crawler to extract information about potential Amazon partners.

Data Science Intern - Aplicativos de Bolso   03/2021 - 09/2021
Designed and implemented a new Deep Learning-based recommender system that assists Law Students in studying for the OAB Examination (Brazilian Bar Examination). The microservice, built using PyTorch, GRPC Python, and SQLModel, recommends questions to the users according to their performance on the application's simulations.

Combinatorial Optimization Developer - Atoptima (France) and UFPB   11/2020 - 04/2021
Contributed to the development of Camina, an Open-source Vehicle Routing Problem Solver in Julia Language. I've developed heuristics and new features that improved Camina's time performance and reduced computational cost to be equivalent to C/C++ solvers, such as VRPSolver.

RESEARCH AND LEADERSHIP EXPERIENCE

Undergraduate Research Assistant - CBICA University of Pennsylvania and ARIA UFPB   06/2021 - Present
Researching and developing methods to generate realistic simulations of the breast anatomy (phantoms). Our objective is to use these phantoms in virtual clinical trials to evaluate digital breast tomosynthesis (DBTs) systems. Our work using Perlin noise originated three papers published in the SPIE Medical Imaging 2022 and IWBI 2022. I am currently developing a method using Stable Diffusion to generate phantoms.

Co-Founder and Advisor TAIL - UFPB   08/2020 - Present
TAIL (Technology and Artificial Intelligence League) is a non-profit organization oriented by the ARIA LAB professors. The Academic league aims to teach new students, produce content, contribute to AI and Data Analysis field and help the members achieve their goals (internships, graduation programs, full-time jobs).

EDUCATION

B.S in Computer Engineering - Universidade Federal da Paraíba - 8.8/10   07/2018 - 2023

TOOLS AND INTERESTS

Tools   Python, C/C++, Java, Julia, Javascript, PyTorch, JAX, Tensorflow, Dask, SQL, gRPC, Git, Linux.
Interests   Computer Vision, NLP, Machine Learning, Software Engineering, Statistics, Operations Research.

PUBLISHED PAPERS

Novel Perlin-based phantoms using 3D models of compressed breast shapes and fractal noise   SPIE Medical Imaging 2022

Spatial dependency of lesion detectability in digital breast tomosynthesis   IWBI 2022

Multiclass segmentation of suspicious findings in simulated breast tomosynthesis images using a U-Net IWBI 2022

An Approach for Automatic Description of Characters for Blind People   WebMedia 2021

Iris-CV: Classifying Iris Flowers Is Not as Easy as You Thought   BRACIS 2021

HONORS AND AWARDS

Tech Fellow - Fundacao Estudar   09/2022
This process selects students that will lead Brazil's technological revolutions. It is a merit-based scholarship, founded by prominent Brazilian businessmen Jorge Paulo Lemann, Marcel Telles, and Beto Sicupira. It includes a grant to pursue studies abroad, mentorship, and career support. One of 0.6% approved over 4285 applications.