

ADINAN ALVES DE BRITO FILHO

Software Engineer & Undergraduate Researcher

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📍 São Paulo, SP

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EXPERIENCE

Research Software Engineer Intern

IBM Research

📅 Sep 2021 – Present

📍 São Paulo, SP

I am responsible for developing a conversational assistant aimed at studying the financial practices of women micro-entrepreneurs in low-income communities.

My current tasks include:

- Integrating microservices with Python applications
- Deploying web applications on Cloud services
- Developing and versioning Rest APIs
- Creating NoSQL databases
- Containerizing and managing Docker images
- Creating NoSQL databases
- Designing and building chatbots on IBM Watson Assistant
- Deploying Machine Learning models on the cloud

Internship Highlights

🔗 I am responsible for developing code, writing documentation, and maintaining an open-source project at IBM, which primary objective is to disseminate internal solutions for creating chatbots on WhatsApp and Telegram. Project available at: ibm.biz/BdPawZ.

⚙️ I was responsible for the development, support, and maintenance of an interactive application designed to showcase the customization capabilities of IBM's AI-based voice services. The application was successfully demonstrated at the Conversational User Interfaces 2022 conference held in Glasgow, UK. A demo introduction video is available at: youtu.be/eXCEcv-0ZCQ.

👥 I was honored to be the first intern invited to join the Research Engagement Catalysts program. As a community representation team member, I play an expressive role in mediating between the leadership and the community.

📈 I successfully created and implemented a comprehensive communication and outreach strategy for the IBM Research Brazil development community. The results were an impressive increase in community engagement and participation in various community-driven initiatives.

☰ I participated in the development, writing, and defense process of a patent aimed at mitigating misinformation.

HIGHLIGHTS

🔗 Over 4 years of experience in Software Development, with significant expertise in developing disruptive solutions for research projects.

🔍 Publication of papers in top-tier international scientific conferences, such as SIBGRAPI, NeurIPS, and CUI.

HARD SKILLS

Software development

Python · Java · C · HTML5 · CSS
NoSQL · SQL · Rest APIs · Postman
Docker · Flask · GitHub

Data Science & AI

Pandas · Numpy · Scikit-learn
Matplotlib · Seaborn · Tableau
Regression · Classification · Clustering

IBM Technologies

Watson Assistant · Speech to Text
Text to Speech · Cloudant · Code Engine
Cloud Pak For Data · Cloud Foundry

SOFT SKILLS

Fast-learning · Proactivity · Engagement
Leadership · Problem-solving

EDUCATION

B.S. in Information Engineering

Federal University of ABC

📅 2019 – Present

B.S. in Science and Technology

Federal University of ABC

📅 2019 – 2023

Computer Technician

ETEC de Sapopemba

📅 2015 – 2017



Volunteer at BRG PcD Brazil, an internal IBM initiative to support, promote, and give a voice to the PcD community. I contribute to event organization, informative post creation, and visual content production for IBM Brazil's internal and external communication.

UNDERGRADUATE RESEARCH

Study and Comparison of Image Compression Techniques based on Discrete Transforms

Federal University of ABC

📅 Sep 2020 – Aug 2021

📍 Santo André, SP

This project aimed to create a new methodology for image compression based on the Discrete Cosine Transform, which outperformed the traditional JPEG compression in terms of performance and quality. Additionally, an [interactive interface](#) was developed in Python to study the effects of compression and promote popularization to the field of science.

We [published](#) and presented this study at SIBGRAPI 2022. The project was supervised by Kenji Nose-Filho, Ph.D.

Development of an Interactive Interface for Audio Signal Requantization and Resampling

Federal University of ABC

📅 Oct 2019 – Aug 2020

📍 Santo André, SP

The project focused on developing an interactive Python-based interface for studying digital audio processing. The [interactive interface](#) includes interactive buttons, an audio player, and waveform and spectrogram graphics. Its objective was to promote science popularization. Article available [here](#).

The project was supervised by Kenji Nose-Filho, Ph.D.

PUBLICATIONS

👤 Conference Proceedings

- **A. Brito-Filho** and K. Nose-Filho, “Estudo e comparação de técnicas de compressão de imagens baseadas em transformadas discretas,” in *Anais Estendidos do XXXV Conference on Graphics, Patterns and Images*, Natal/RN: SBC, 2022, pp. 124–128. DOI: 10.5753/sibgrapi.est.2022.23275.
- H. Candello, E. Brazil, R. De, *et al.*, ““today we talk to the machine” -unveiling data for providing micro-credit loans using conversational systems,” in *Virtual Workshop on Human-Centered AI Workshop at NeurIPS 2022*, Dec. 2022.
- H. Candello, M. Grave, E. Brazil, M. Ito, **A. Brito-Filho**, and R. de Paula, “How can ai leverage alternative criteria and suggest a better way to measure credit worthiness and economic growth?” In *Proceedings of the 4th Conference on Conversational User Interfaces*, ser. CUI '22, Glasgow, United Kingdom: Association for Computing Machinery, 2022, ISBN: 9781450397391. DOI: 10.1145/3543829.3544537.

LANGUAGES

Portuguese Native

English Professional

Spanish Beginner

COURSES

- The Python Bible
- Docker Essentials
- Python for Data Science
- Data Analysis Using Python
- IBM Watson Assistant Foundations
- IBM Cloudant Developer Essentials
- IBM Cloud Essentials

REFERENCES

Kenji Nose-Filho, Ph.D.

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Heloísa Candello, Ph.D.

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Marcelo Grave, Eng.

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