

# NATÁLIA CAPRA FERRAZZO

Application Developer at IBM | Physical Engineer

📍 Porto Alegre, Brazil

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 LinkedIn

 GitHub

 Portfolio

## ABOUT

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I'm a B. Sc. in Engineering Physics student at Federal University of Rio Grande do Sul, currently in 10th semester, with expected graduation in October 2022. I'm fascinated about Physics, Quantum Computing and Data Science.

I've worked as a Data Scientist at Cadastra, a digital marketing agency where I helped to automate a verification algorithm to check affiliate sales legitimacy. The algorithm was able to detect fraudulent affiliation, and, with this, our company was able to recover almost R\$ 500,000 in fraudulent sales affiliation.

At IBM I've worked with Watson AI checking the conversation flow of a chatbot from a Brazilian telecommunication company. Our team helped to increase customer service satisfaction.

Currently, I'm working with microservices and cloud for a Brazilian bank app, helping to develop and maintain a financial portfolio that are used for over 16 million customers.

## WORK EXPERIENCE

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 IBM

### Application Developer

July 2022 – Present

Technical Specialists in this Job Role have expertise in translating IT requirements in the design, development, and assembly of components to create custom information systems. Typical examples of the deliverables are functional and technical designs, models, components, code, unit tests, and documentation.

 IBM

### Associates Internship Programme

August 2021 – July 2022

- Data Engineer
  - Help with ETL jobs, checking and producing evidence of correct ETL job flow,
  - Work with SQL queries to check if the final data are being correctly generated,
  - Support data analysts, data scientists and data engineers.
- Q&A
  - Development and debug of e2e tests for AI chatbot to check conversation flow,
  - Backend development using Node.js,
  - Perform some tasks on Watson Studio,
  - Set up API in Postman.
  - Support developers.

## CADAstra

### Data Scientist

February 2016 – October 2022

- Develop myself to assist in data gathering and data analysis from distinct tools for result measurement,
- Generate insights of new marketing strategies and goals,
- Draft daily result reports,
- Research about data analysis and data visualization,
- Apply machine learning models to forecast sales,
- Cluster customers, helping CRM team personalize communication with them,
- Automated an algorithm that was able to verify the legitimacy of affiliate assignment sales,
- Cross selling strategy implemented to a travel company,
- Support new data scientists.

## EDUCATION

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### FEDERAL UNIVERSITY OF RIO GRANDE DO SUL

#### Bachelor of Science – B. Sc., Engineering Physics.

February 2016 – October 2022

In my country, bachelor's degrees last 5 years (10 semesters).

The Engineering Physics course aims to train professionals with solid conceptual and practical knowledge in Physics, Mathematics, computational methods and engineering skills; innovate in areas such as metrology, instrumentation, vacuum technology, physical characterization of materials, microfabrication, photonics and semiconductors. Engineering Physics is the application of Modern Physics in the Engineering of technological innovations. It is a connection between Science and the traditional branches of Engineering. As it has a generalist education, the Bachelor's in Engineering Physics will be able to work in several sectors, mainly those of the environment, energy, technology, finance, medicine, logistics and transport.

My harmonic mean is 8.79 out of 10, considering all the disciplines I've done until now.

## PUBLICATIONS

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### UNIGOU

#### Solving the Traveling Salesman Problem with IBM Quantum®

February 2022

In this article, the basic concepts of Quantum Computing were studied and applied to NP-hard Travelling Salesman problem. Through the tools provided by IBM Quantum and Qiskit initiative, it was able to implement it via Python libraries and Jupyter Notebook. The results were as computed for similar publications.

 [Article](#)

## CERTIFICATIONS

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**IBM Data Science  
Professional Certificate**



**Watson Assistant Hands-On**



**IBM Consulting  
Delivering Business Value**



**Docker Essentials: A Developer  
Introduction**



**Qiskit Global Summer School  
2022 Quantum Excellence**



**Modern JavaScript From The  
Beginning**



**Docker and Kubernetes: The  
Complete Guide**



**IBM Certified Associate Developer  
Quantum Computation using  
Qiskit v0.2X**



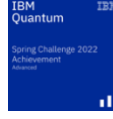
**EF SET Certificate  
English C2 Proficient**



**Qiskit Advocate**



**Big Data Foundations**



**IBM Quantum Spring Challenge  
2022 Achievement**



**Udacity Nanodegree Program  
AWS Machine Learning**



**The Complete Node.js Developer  
Course**

## SKILLS

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Quantum Computing · Machine Learning · Data Science · Python · SciPy · NumPy · Pandas · Git

Qiskit SDK · Watson Studio · Jupyter Notebook/Lab · Postman · Docker · Agile Methodology

Javascript · Java · Node.js · SQL · ETL