

# ITAMAR ROCHA FILHO

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**Languages** Native Portuguese, Fluent English, Intermediate French and Basic Spanish.

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## EXPERIENCE

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### Software Engineering Intern - Google

08/2021 - Ongoing

I am working on Google Search - contextualization team. I am developing a new feature for the search engine. My work consists of mapping the data sources and analyzing the options, implementing the feature's back-end, testing the approach, and implementing the front-end.

### Research Initiation Fellow - UFPB

09/2020 - 09/2021

Developed an approach to automatically describe characters — in a video or in an image — combining Deep Learning (DL), Face detection, Facial Expression detection techniques, and audio synthesizers. Our proposal uses the detection tools, applies some DL models to the analyzed data, and generates an audio description. The research paper was published on WebMedia.

### Developer and Project Documenter - Integrated Command and Control Center (CICC)

11/2020 - 07/2021

Management and documentation of the project. The project consisted of developing a platform that integrates different Federal databases in real time, using different classified documents and tracking information provided by the Paraíba's treasury office.

### Combinatorial Optimization Developer - Atoptima (France) and UFPB

11/2020 - 04/2021

Atoptima is a french startup in decision support system aiming to offer cutting-edge mathematical optimization to all businesses requiring resource assignment optimization. My job consisted of documenting/testing/building private software and optimizing Coluna.jl a mathematical programming solver.

## EDUCATION

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### B.S in Computer Engineering - Universidade Federal da Paraíba - 9.70/10

07/2018 - Ongoing

## TOOLS AND INTERESTS

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**Tools** Julia, C, C++, Python, Javascript, Pytorch, Tensorflow, Scikit-learn, CPLEX, SQL, Git, Linux.

**Interests** Software Engineering, Deep Learning, Reinforcement Learning, Operations Research, Computer Vision.

## PROJECTS

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### GANdido Portinari

A GAN model that stylizes photos as if they were painted by the Brazilian artist Candido Portinari.

### Binary-Bot

Binary-Bot was one of my first Artificial Intelligence projects. It consists of an automatic trading system using LSTM neural networks.

## EXTRACURRICULAR ACTIVITIES

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### President and Co-Founder TAIL - UFPB

08/2020 - Ongoing

TAIL (Technology and Artificial Intelligence League) is a non-profit organization that is oriented by the ARIA LAB professors. The Academic league aim is to teach new students, produce content and contribute to AI and Data Analysis field.

## PUBLISHED PAPERS

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### 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

The paper shows the results and comparisons of different computer vision networks and algorithms on our newly created Iris flower image dataset. The main goal is to propose a new toy/benchmark dataset that is in fact more challenging.

## RELEVANT CERTIFICATES

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### Deep Learning Specialization - deeplearning.ai (Cousera)

09/2020

### DAT257x: Reinforcement Learning Explained - Microsoft(edx)

05/2020

## HONORS AND AWARDS

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### Fellow Tech - Fundacao Estudar

09/2021

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.