



## Matheus Cardoso

Computer Scientist (B. Sc.)

### Contact

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### Skills (0 to 5 yrs.)

#### Programming Languages

**Python** 3+ yrs.  
**Shell Scripting** 3+ yrs.  
**R** 1.5+ yrs.  
**C/C++** 1+ yrs.  
**SQL** 6+ mos.  
**Java** 6+ mos.  
**Rust** 6+ mos.  
**Javascript** 6+ mos.  
**RISC-V Assembly** 6+ mos.

#### Technologies

**HTML/CSS** 2.5+ yrs.  
**Git** 2.5+ yrs.  
**LaTeX** 1.5+ yrs.

## Biography

Computer science student, work with data analysis in the area of genomics and proteomics, developing software that automatically generates statistics on enriched monoclonal antibodies. His work mainly involves machine learning techniques, data mining, data analysis and data visualization. As a result, in addition to working in the area of computer sciences, he also have a strong focus on biological and data sciences.

In his free time he have been contributing to open source projects as well; Spanning from data science frameworks (Pandas), to educational learning software (Anki), and productivity programs (ncspot, unclutter and hacksaw).

## Education

### Computer Science | B.Sc. student

University of Brasília - UnB

03/2021 - today

I aced all my exams and projects until now.

GPA: 5/5

### Computer Science | B.Sc. student

Federal University of Rio de Janeiro - UFRJ

01/2020 - 03/2021

Due to the pandemic I opted to move from Rio back to Brasília.

GPA: 2.9/5

### Biotechnology | B.Sc. student

University of Brasília - UnB

01/2019 - 12/2019

I had the opportunity to internship in UnB's Bioinformatics and Immunology laboratory, where I contributed to the development of a software to assess enrichment of monoclonal antibodies. There I found that more than research I really enjoy to code, so I opted to change my majors to Computer Science.

GPA: 4.8/5

## Projects

### ATTILA - AutomaTed Tool For Immunoglobulin

University of Brasília - UnB

01/2019 - today

ATTILA is an open source project that analyses phage display libraries in order to assess monoclonal antibody enrichment. Doing this, the software is able to predict which antibodies can more effectively bind to target molecules. As a result, ATTILA becomes a useful tool to scientists working on vaccine development.

### cdr3-parser

University of Brasília - UnB

06/2021 - today

**cdr3-parser** is a command line program written in Rust to convert intermediate output files generated from ATTILA into csv files containing statistics about VH-CDR3 regions presented in the input file. **cdr3-parser** leverages Rust's thread-safe capabilities to parse the file in the most efficient way possible using all threads available in the UnB's Bioinformatics laboratory server.

## Frameworks

Biopython	2.5+ yrs.
Tidyverse	1.5+ yrs.
Tidymodels	1.5+ yrs.
Numpy	6+ mos.
Pandas	6+ mos.
Django	6- mos.

## Areas of expertise

System administration/ Linux	3+ yrs.
Bioinformatics	2.5+ yrs.
Data science	2+ yrs.
Low level programming/ Assembly	6+ mos.

## Languages

Portuguese	Native
English	B2
Spanish	B1

## Interests

- ▶ Bioinformatics/  
Computational Biology
- ▶ Artificial Intelligence
- ▶ Protein Folding
- ▶ Open Source
- ▶ Embedded Systems

### The Adventures of Lolo

University of Brasília - UnB

03/2021 - 05/2021

Remake of the game *The Adventures of Lolo* in RISC-V Assembly.

### Mastermind

Federal University of Rio de Janeiro - UFRJ

02/2021 - 03/2021

Remake of the game *Mastermind* in C.

### Brazilian Students' Performance on ENEM

Johns Hopkins Bloomberg School of Public Health

08/2020

A data visualization project showing the performance of Brazilian students applying to a bachelors of science at Universidade de São Paulo (USP), one of the best universities in Brazil.

### Word Predictor Model

Johns Hopkins Bloomberg School of Public Health

08/2020

A web application powered by a machine learning model able to predict the next word in a sentence.

## Awards & Certificates

### Data Science Specialization

Johns Hopkins Bloomberg School of Public Health

01/2020 - 09/2020

### Copenhagen Bioinformatics Hackathon

BioLib

2020

Winner of the Hackathon challenge "*Variant Pathogenicity Prediction*".

### Capes Prize University Talent

CAPES

2019

Awarded by the Brazilian Ministry of Education as one of the top 1000 most talented freshman students in the country.

### Hackathon NASA Space Apps BSB

NASA

2019

Awarded as 5th out of 60+ teams in the Brazil's Midwest regional phase.