

Luiz F. Giserman

Computer Engineering Student



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EDUCATION

Engenharia de Computação e Informação Universidade Federal do Rio de Janeiro

08/2017 – Present

CRA 7.7

WORK EXPERIENCE

Undergraduate Research

Grupo de Telecomunicação e Automação da Universidade Federal do Rio de Janeiro (GTA UFRJ)

09/2018 – Present

Telecommunication Systems laboratory that generates innovative research on computer networks hot topics such as VANETs (Vehicular ad-hoc Networks)

Achievements/Tasks

- Analyzed data of traffic simulations to identify bad driving performances and defined vehicular networks solutions to reduce congestion in day-to-day traffic. This analysis was then made into an article that was accepted by the Brazilian Symposium on Computer Networks and Distributed Systems 2020. Currently, I am studying Machine Learning solutions to automatically detect traffic infractions.
- As a side project, I am writing an article that analyzes Machine Learning models for attack detection in IoT networks, allowing me to develop a better practical understanding of Machine Learning

Programming 101 Tutor

Universidade Federal do Rio de Janeiro

08/2018 – 09/2018

Achievements/Tasks

- As a result of my interest in programming and of my academical achievements in that class, I was selected to tutor Computing 101. Unfortunately, I had to give up the position only a month after I had started because I got accepted for an undergraduate research scholarship at GTA UFRJ.

Algorithms and Graphs Tutor

Universidade Federal do Rio de Janeiro

07/2020 – Present

Achievements/Tasks

- Due to my understanding of algorithms and data structures and time/space complexity, as well as my liking to graphs theory and my performance in the Algorithms and Graphs class, I have been appointed as the new tutor, helping students and creating and grading weekly problems lists.

SKILLS

Algorithms and Data Structures

C

C++

Python

Computer Networks

Machine Learning

PERSONAL PROJECTS

IoT System to Monitor Environmental Variables Remotely (08/2019 – 12/2019)

- In my Software Engineering class I, along with my group, went through all of the steps of a software engineering project, designing all of the required documents and implementing the system: we used a Raspberry Pi to collect temperature and humidity from a High Power Computer lab, to send it to an AMQP server, that is then forwarded to a database and displayed on a Grafana Dashboard server.

Traffic Analysis (06/2019 – 06/2019)

- Using Python's Pandas, Numpy and Matplotlib, I implemented a program that uses the Google Maps API to collect data from a two steps route, mapping the time needed to get from one point to the other in 48 different times of the day, each day of the week. As a result, it is easy to analyze traffic flow and estimated duration of the trip at every hour of the week.

CERTIFICATES

Certificate in Advanced English (CAE), Cambridge
English Language Assessment. (2016)

Academic Distinction (2017)

Selected participant of the "Introduction to Engineering" class's best group. We implemented a Semi 3D game using the Lua language and the LOVE 2D framework

LANGUAGES

English

Native or Bilingual Proficiency

Spanish

Elementary Proficiency

INTERESTS

Software Engineering

Networks

Interoperability

Machine Learning

Graph Theory

Web Scraping

Internet of Things