

# Samuel Antunes Miranda

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## TECHNICAL SKILLS

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**Programming Languages:** Python, JavaScript, TypeScript, Matlab, HTML, CSS, C++, R.

**Frameworks:** React, NextJS, NodeJS, Express, MySQL, PyQt, Keras, OpenCV, PyTorch, Socket.io, Axios, Router, Google Colab, Numpy, Pandas, Matplotlib, Astropy.

## TECHNICAL EXPERIENCE

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**SFU Trottier Observatory** | *Software Engineer* May 2023 - Present

- Built a desktop application, using PyQt and numpy, in order to automate the workflow related to the processing of astronomical images taken with the observatory equipment.
- Designed a friendly User Interface for the non-technical observatory staff members.
- Improved performance of computationally intensive steps by more than 5 times with parallel processing.

**Simon Fraser University** | *CS Peer Tutor* Jan 2023 - Aug 2023

- Mentored first- and second-year students taking Computer Science classes, providing assistance in Python, C and C++.
- Taught technical concepts to students, such as Data Structures, Algorithms and OOP.
- Managed a room full of students, maintaining a queue so that each student could have its needs met individually.

**Maua Institute Of Technology** | *ML Researcher* Jan 2020 - Dec 2020

- Conducted research in Data Science, using data from the European CoRoT satellite, to create a model capable of predicting whether a star had an exoplanet or not.
- Created a model to predict existence of exoplanets, using Python, the Keras library, Recurrence Networks and Convolutional Neural Networks, and obtaining an accuracy of 86.6%.
- Published a paper explaining the pipeline of the problem, the model, and the results, for further research to be done.

## PERSONAL PROJECTS

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Online Drawing App Oct 2023 - Nov 2023

- Created a website based on the gartic.io game, where users could join a room, and draw on a single canvas, and the drawing would show up in real time to every user who was in the same room.
- Programmed backend with JavaScript, using NodeJS and the socket.io library to communicate data.
- Coded frontend with React and NextJS, to create the drawable canvas.

**Cryptobook** May 2022 - July 2022

- Developed a social media clone based on Facebook, focused on crypto, where people can make posts, like posts, check transactions, and search for other posts stored in a MySQL database.
- Used git and github to work with 2 other colleagues, for simultaneous teamwork and version control.
- Programmed the project in JavaScript, with React in the front-end, and NodeJS in the backend.

## EDUCATION

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**Bachelor of Computer Science** Expected December 2024

Simon Fraser University, Burnaby, BC

GPA: 3.57/4.33

- Math Minor
- Open Scholarship - Fall 2022

**Transferred Computer Engineering Credits** Jan 2019 - Jun 2021

Maua Institute of Technology, Brazil

GPA: 9.1/10

- Scholarship for 5-year program.

## CERTIFICATES

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**Digital House** Dec 2020

**Cisco** Jun 2019