

# Henrico Bueno Hirata

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## Objective

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Computer Engineering student with effective communication skills and teaching experience interested in hardware engineering, machine learning, robotics, and computing architecture. Dynamic and adept at collaborating with a multidisciplinary team to develop multiplatform applications, integrating software and hardware, working in a groundbreaking environment, and learning about new technologies. Successful in competing at innovation hackathons and science Olympiads. Seeking an internship for Summer 2025.

## Education

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**Georgia Institute of Technology | Atlanta, GA**

*August 2024 – Present*

Bachelor of Science in Computer Engineering (Concentration: Computing Hardware, Systems and Architecture)

**Farias Brito High School | Fortaleza, Brazil**

*April 2022 – December 2023*

High School Diploma, GPA 4.00

## Experience

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**Farias Brito High School | Fortaleza, Brazil**

*August 2022 – July 2024*

***Astronomy and Astrophysics Tutor***

- Trained 60+ students preparing for the International Olympiad on Astronomy and Astrophysics (IOAA).
- Wrote 20+ study guides and 10 practice exams using LaTeX.
- Achieved the result of three students awarded at IOAA 2024 (1 silver and 2 bronze medals).

**Andreia Presentes | Olimpia, Brazil**

*February 2020 – March 2022*

***Software developer***

- Developed a sales, storage, and financial control system in Python for a clothing store.
- Converted and migrated a previous database with 3K+ costumers to a new MySQL database.
- Incorporated APIs for internet banking and automated messaging.

## Projects

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**Robotic Navigation System**

*August 2024 – Present*

*Developing a robotic system to navigate a maze avoiding collisions in an iRobot Create3 platform.*

- Implemented collision protection, mapping, and navigation features using infrared and touch sensors with Python code.
- Working in a recursive tool for the robot to explore and exit a random maze autonomously.

**C-Shark Team | BRASA Hacks Hackathon**

*August 2024*

*Developed a machine learning feature to predict customers' shopping behavior and increase the average ticket size.*

- Implemented random forest algorithms to decide the better days to offer discounts for costumers.
- Programmed a web user interface with HTML, CSS, JavaScript, and Flask (Python library) to display the new feature.

## Skills

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**Programming:** Python (3+ years of experience), C++ (intermediate), Java, HTML and CSS, JavaScript (basic), SQL, LaTeX, Data structures and algorithms, Depth-First and Breadth-First Search, Random forest, Sorting Algorithms, Object-oriented programming, **Hardware:** Arduino (1+ year of experience), Raspberry Pi (beginner), electronic components, oscilloscope.

**Software:** PyCharm, Visual Studio Code, NI LabVIEW, MATLAB, SolidWorks, Git, Microsoft 365 (All 2+ years of experience).

**Communication:** Teaching (3+ years of experience), technical reports, presentations (poster and YouTube lives), adaptive speech.

**Languages:** Portuguese (native), English (fluent).

## Relevant Coursework

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**Intro to Computing with Python:** Computer science concepts, data structures, algorithms, recursion, and Python programming.

**Linear Algebra:** Matrix algebra, eigenvectors, linear modeling, page-rank algorithms, and MATLAB for least-squares approximations.

## Leadership

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**Olympic Nucleus for Knowledge Incentive (NOIC) | Department Coordinator**

*April 2023 – Present*

- Oversaw 7 volunteers producing study resources (using LaTeX) for International Astronomy competitions.
- Launched and coordinated an Online Astronomy Olympiad (OBOA) in Brazil with 1.7K participants in 2023.
- Authored a 275-page Astrophysics e-book for national and international science Olympiads preparation with 10K+ downloads.