Iago Mendes

Computational Physicist

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Education

Bachelor's Degree, Oberlin College
Physics & Computer Science Double Major — **Spring 2021 – Fall 2024**

- Overall GPA: **4.01** / 4.00. Major GPA: **4.03** / 4.00.
- STRONG (Science and Technology Research Opportunities for a New Generation) Scholar
- John F. Oberlin Scholarship Recipient
- Relevant Coursework:

Modern Physics	Waves & Optics	Computational Physics (**Python**)
Classical Mechanics	Quantum Mechanics	Electromagnetism & Thermodynamics
Astrophysics: Stars & Planets	Algorithms	Systems Programming (**C**)
Data Structures (**Java**)	Theory of Computation	Computer Architecture (**Assembly**)

Research

Isometric Embedding of Black Hole Horizons in Euclidean Space
Robert Owen's Lab, Oberlin College & SXS Collaboration — **Fall 2021 – Present**

- Implemented method in a **finite-difference code** (bit.ly/FDEmbed) & in the **Spectral Einstein Code**.
- Ran and studied binary black hole merger **simulations** in a high-performance **supercomputer**.
- Presented at the **APS April Meeting** (2023) and at Oberlin's **Research Symposium** (2022, 2023).
- Invited for Oberlin's Physics **Honors Program** and selected as an Oberlin's **Featured Researcher**.

Work Experience

Oberlin College – Oberlin, OH
Resident Assistant, Underrepresented in STEM House — **Fall 2021 – Present**
Teaching Assistant — **Fall 2022 – Present**

- Courses: Mechanics & Relativity, Electromagnetism & Thermo., and Programming Abstractions.

STEM Community Leader — **Fall 2023 – Present**

Google – Bay Area, CA
Software Engineer Intern, Wear OS — **Summer 2023**

- Used **Java** and **C++** to develop features on the **Android** operating system for smartwatches.
- Collaborated with my team and others, including managers, input engineers, and UX designers.

Training Software Engineer Intern, Google Assistant — **Summer 2022**

- Used **Angular** (**TypeScript**) to create reusable components for Google's issue-tracking platform.
- Completed entire development process: design doc, implementation, documentation, and launch.

Projects

Star View — starview.one

- Developed app & website for stargazing conditions.
- **10k+** installs & **1k+** active users on Google Play.

Hyperbolic Spectral Solver — bit.ly/HySpec

- Used **Python** to solve the wave and advection equations using **spectral methods**.

Astronomical Olympic League

- Created free materials and events for students to prepare for Astronomy competitions.

Awards

Intl. Astronomy & Astrophysics Competition

- Gold Honor for being in the **top 5%** (2021, 2023).
- Silver Honor for being in the **top 10%** (2020).
- Ambassador Award for **recruiting** students (2020).

International Youth Math Challenge

- Silver Honor for being in the **top 10%** (2021).
- Bronze Honor for being in the **top 20%** (2020).

Intl. Astronomical Search Collaboration

- Provisional Discovery of an Asteroid (2021).