

João Pedro Bonchristiano

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EDUCATION

Georgia Institute of Technology

B.S in Computer Science, Minor in Mathematics

Atlanta, GA

Aug 2022 – May 2026

- Concentrations: Computer Architecture & Artificial Intelligence
- Coursework: Computer Organization, Systems & Networks, Data Structures & Algorithms, Stats & Probability
- Cumulative GPA: 3.82; Major GPA: 4.0

Stanford University

Stanford Summer Quarter

Stanford, CA

June 2021 – Aug 2021

- Coursework: Client-side Internet Technologies, Programming Methodology, Intro to Data Science
- GPA: 4.112

EXPERIENCE

Citadel

Software Engineering Intern

New York, NY

June 2024 – Aug 2024

Georgia Tech HPArch Lab

Undergraduate Researcher

Atlanta, GA

April 2024 – Present

- Researching resilience for post-Moore architectures as part of the High Performance Architectures lab.
- Improving accuracy for Analog Accelerators with applications in autonomous systems and supercomputers.
- Investigating soft-errors caused by cosmic radiation and error mitigation techniques for UAVs.

Microsoft

Software Engineering Intern (TNT Program)

Redmond, WA

June 2023 – Aug 2023

- Developed an ERP solution for Small & Midsize Enterprises, using React Native & Redux.
- Created multiple cross-platform (iOS/Android) components and designed the application's data & state flow.
- Integrated components with the backend using internal Azure Cognitive Services.

Brazilian Student Association (BRASA)

Software Analyst

Atlanta, GA

Nov 2022 - Aug 2023

- Developing BRASA's Web App, used by hundreds in annual conferences - using Express.js & PostgreSQL.
- Maintaining BRASA's central API - created multiple endpoints to handle student & sponsor data.
- Migrated codebase from JavaScript & Sequelize to a more modern TypeScript & TypeORM stack.

PROJECTS

Portfolio Optimization Engine

- Created Python program to maximize the Sharpe Ratio out of an arbitrarily large selection of stocks.
- Using GPU-acceleration with CUDA to produce minimum variance portfolios given a return target.
- Leveraged Monte Carlo simulations to assess different allocation strategies and potential outcomes.

Pipelined Processor Datapath

- Designed a number of datapaths for a RISC computer based on MIPS for a Systems course.
- Extended functionality to add interrupts and support for external I/O devices.
- Implemented data forwarding and pipeline flushing in order to resolve various hazards.

Energy Suite

- Developing a suite of desktop programs for personal use, consisting of a browser, text editor & code editor.
- Finished Joule, a Chromium-based browser made with Electron.js, with cookie support & credential management.
- Accrued a small user community on GitHub with 100+ unique downloads.

SKILLS

Languages: JavaScript, Python, C, C++, SQL, TypeScript, Java

Technologies: React.js, Node.js, CUDA, MongoDB, AWS, Azure, Docker, Git

Fluency: Portuguese (Native), English (Native), Spanish (Conversational)