

Bruno Zalcberg

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Education

Bachelor of Science, Computer Engineering – Insper, São Paulo, Brazil Expected December 2026
Specialized Student Initiatives: Technical Director of Blockchain Insper and active member of Insper Dynamics and Insper Coding

Experience

Poly Cashback Madrid, Spain
Software Engineer Intern January 2024 – February 2024

- Led backend API development with MySQL and Express.js, enhancing data handling efficiency by 20%, by optimizing database queries and server responses.
- Integrated backend API with a React-based admin dashboard, enhancing user interface performance.
- Collaborated with a multidisciplinary team to design and implement key modules, significantly improving core application functionality.
- Demonstrated commitment and clear understanding of digital asset management challenges, contributing to a successful project outcome.

Projects

Quicknote youtu.be/H8AIfCozpuw

- Developed "Quicknote", an alternative to Google Docs, using React, TypeScript, MongoDB and WebSockets to create a more efficient note-taking and sharing platform.
- Implemented optional email-based magic link login for a quick and secure user authentication experience.
- Enabled real-time note saving and simultaneous editing, facilitating collaboration among multiple users.
- Designed a clean and intuitive user interface to enhance user experience and productivity.

Bluetooth Controller github.com/brunozalc/bluetooth-controller

- Designed and built a low-latency Bluetooth video game controller using a Raspberry Pi Pico W, achieving latency as low as 5ms.
- Developed RTOS-based C code for the embedded system, enabling real-time data processing and control.
- Implemented a Python script for Bluetooth integration and functionality with the Windows system.

c8emu github.com/brunozalc/c8emu

- Developed a CHIP-8 emulator using C++ and the SDL library.
- Created a custom sound engine to replicate the audio output of original CHIP-8 games.
- Gained practical experience in CPU emulation, memory management, and input/output handling through this project.

Skills

Languages: Python, C++, C, TypeScript, JavaScript, SQL, HTML, CSS

Frameworks: React, Node.js, Express.js, WebSockets, Django

Databases and tools: MongoDB, MySQL, PostgreSQL, Git, Docker, Figma, Postman

Cloud services: AWS, Firebase, Render