OTAVIO SARTORELLI DE TOLEDO PIZA

COMPUTER SCIENCE HONORS

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ABOUT ME

Technical Skills	C/C++, Python, Jupyter Notebooks, TypeScript, JavaScript, Java, Bash, SQL, Dart, LaTeX, R.
Technologies	Express, React, Angular, Git, CMAKE, MongoDB, PostgreSQL, Firebase, Docker.
Languages	English (C2), German (B2), Spanish (B2), Portuguese (native).
Interests	Analysis of Algorithms, Databases, Search, Systems Programming, Security.

WORK EXPERIENCE

Google – STEP Intern   Irvine, CA (2022.05 – 2022.08)

- Created a **full-stack web application** for **searching inside an internal tool** for a user-specified resource, **improving system stability** by removing the need to perform error-prone manual searches and **facilitating debugging**.
- Developed an **SQL database query** to search for a user-specified resource inside an internal tool's storage.
- Built a back-end **RPC service with C++** responsible for processing query requests received through a **Java proxy** service from the front-end and responding with the appropriate resources.
- Implemented a **generic filter model** for front-end tables, **facilitating adding data filtration** functionality and **reducing boilerplate code** between different components.
- Developed a front-end page utilizing **AngularDart**, allowing users to query for resources from a back-end service and see the results in a table.

BRASA – Fullstack Developer   Remote (2021.08 – present)

- Created a **unified authentication system**, which supports **multiple user types and access levels**.
- Established an **internal tool request and development process**, **reducing delivery time by 300%**.
- Refactored our API into a **centralized domain-driven design**, improving **maintainability and expandability**.
- Developed a full-stack LinkTree-like app to **allow users to easily share their profiles** during a conference.

PERSONAL PROJECTS

REST++ – C++ REST Framework   github.com/OtavioPiza/restpp

- Developed web sockets using the **C socket library**, allowing clients to connect to the server.
- Implemented **multiple execution modes, both concurrent and single-threaded**, enabling the user to **choose the one better suited to their needs**.
- Designed a **graph-based routing system** dispatching the **requests to the appropriate handlers**.
- Working on **building a request-body parser**.

TodoDoro – Productivity TODO List   github.com/OtavioPiza/restpp

- Developed a full-stack web-based application with **MongoDB, Express, React, and NodeJS**, allowing users to **create tasks and work on them according to the Pomodoro method**.
- Implemented a **JSONWebToken-based authentication system**.
- Working on **sending verification emails after account creation**.

EDUCATION

Purdue University   West Lafayette, IN (2020.08 – 2024.05)

- Bachelor of Computer Science Honors.
- Grade Point Average: 3.96 / 4.00.
- Dean's List & Semester Honors: Fall 2020, Spring 2021, Fall 2021, Spring 2022.
- Relevant Coursework: **Analysis Of Algorithms** (Planned Spring 2023), **Intro to Relational Databases** (Planned Spring 2023), **Software Testing** (Planned Spring 2023), **Web Info Search & Management** (Fall 2022), **Operating Systems** (Fall 2022), **Information Systems** (Fall 2022), **Software Engineering I** (Spring 2022), **Systems Programming** (Spring 2022), **Data Structures and Algorithms** (Fall 2021).
- Teaching Assistant: Competitive Programming I (Fall 2022).

LauchPad – Treasurer
- Responsible for **managing the club's funds** for events.
- Helped **plan mentorship program** where **first-year mentees get help from upperclassmen mentors** developing their projects.
- Helped **organize an event with AT&T** where **club mentees we able to present their projects** to recruiters and engineers their projects.
- Working on **developing a website for the club**.