Gabriel De Souza De Almeida

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SUMMARY

Driven computer science student with over 5 years of programming experience and strong expertise in data structures, algorithms, and mathematics. Proficient in software design and committed to teamwork and collaboration. Bilingual in Portuguese and English, with advanced skills in Spanish. Looking for a summer tech internship to leverage my knowledge and work ethic in tackling complex programming challenges. Portfolio website developed by me: https://degabe.github.io/.

EDUCATION

University of Michigan | LSA — Ann Arbor, MI

Major in Computer Science **| GPA:** 3.5 / 4.0 — *Sep. 2022 - May. 2026*

Relevant Courses: Data Structures and Algorithms, Discrete Math, Calculus, Statistics and Data Analysis, Foundations of Computer Science, Computer Organization and Architecture, Cybersecurity, Web Systems, Data-Oriented Python Programming

SKILLS

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

Technical Skills: Web Development, HTML, CSS, Data-Oriented Python Programming, Object-Oriented Programming.

EXPERIENCE

Web/Dev team- HealingBLUE APP - UofM, Ann Arbor, MI — September 2022 - September 2023

- Conduct an extensive examination of the University of Michigan's websites to identify valuable links that may be integrated into our database.
- Collaborate within a team setting, actively engaging in the formulation of design decisions for both frontend and backend development.

Academic Projects

- Developed a SQL query engine that processes and executes commands such as CREATE, INSERT, JOIN, REMOVE, PRINT, and GENERATE INDEX using a custom parsing and execution framework. This involved implementing various data structures to manage tables and relational data while supporting complex queries, including filtering, joining, and aggregating datasets. I designed a parser to interpret user inputs, ensuring efficient translation of commands into actionable operations within the engine.
- Designed a machine learning algorithm capable of automatically categorizing class forum posts based on their word content, utilizing a sample dataset to provide context. Implemented natural language processing techniques by applying various C++ concepts, such as navigating binary search trees, recursion, and dynamic memory management.
- Developed a user-friendly web application for managing office hours queues. Utilized RESTful APIs to handle incoming requests from users on the backend. Implemented queue data structures to facilitate user interactions, including joining and leaving the queue, while securely storing information like names and locations.
- Engineered a pipelined datapath implementation to emulate a pipelined processor, employing techniques such as data forwarding and branch prediction.