

Samuel Alvarez

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EDUCATION

University of Houston

May 2026

Bachelor of Science in Computer Science, Honors Minor in Data and Society

- Relevant Coursework: Algorithms, Databases, Software Engineering, Automata, Computer Architecture
- GPA/Awards: 3.819, Dean's List Fall 2022 – Fall 2025

TECHNICAL SKILLS

Languages: HTML/CSS, JavaScript, SQL (PostgreSQL, MySQL)

Frameworks: React, Next.js, Node.js

Developer Tools: Git, GitHub, DBeaver, Supabase, VS Code, Tailwind CSS

AI Tools: ChatGPT, Claude, Gemini

PROJECTS

Cougar Connect Volunteer Application

Aug 2025 – Dec 2025

- Created a full-stack volunteering application with a team of 3 students using PostgreSQL, Express, React, Node.js, Next.js, Tailwind CSS, and JavaScript, which allow for account creation, event management, volunteer assignment based on availability, and reviewing participating history
- Managed various aspects of volunteer information using a PostgreSQL database with Supabase, enabling users to track and monitor their history

Post Office Database

Jan 2025 – May 2025

- Developed a relational database application with a 5-person team using HTML/CSS, JavaScript, and Node.js to manage post office functions, including package tracking, customer data management, and sales reporting
- Engineered automated sales reports with SQL queries, and dynamic dashboards, enabling managers to track weekly revenue and identify service trends
- Collaborated in designing the entity-relationship (ER) diagram for the DBeaver managed database, ensuring efficient data structure and normalization

Honors College Research Proposal

Aug 2024 – Dec 2024

- Reviewed Houston's ongoing public health efforts to reduce obesity and identified gaps in current approaches
- Collected and processed datasets from the US Census, CDC, and Harris County Appraisal District to create maps broken down by zipcode and to perform a linear regression
- Presented findings to faculty advisors, highlighting data limitations, areas for further study, and subsequent steps for analyzing the relationship between median income and obesity

EXPERIENCE

Math Instructor

Aug 2023 – Present

Huntington Learning Center, Clear Lake

Houston, TX

- Delivered individualized instruction for K-12 math and standardized test prep (SAT, ACT, ASVAB), improving student comprehension and performance
- Helped students progress from failing to excelling academically, with measurable outcomes including SAT score increases of up to 100 points

ACTIVITIES

CougarCS Tutor

Feb 2026 – Present

- Provided one-on-one tutoring for Automata concepts such as Deterministic Finite Automata and Turing Machines

Phi Beta Kappa

March 2025 – Present

- Recognized by the Dean of the Honors College as 1 of 95 students for exceptional academic achievement
- Among a select minority of students inducted into the organization as a junior