

SAUBDIEL AVALOS

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EDUCATION & CERTIFICATIONS

Duke University

B.S. Computer Science

Aug. 2024 – May 2028

Durham, NC

- **GPA:** 3.44 **Concentration:** Software engineering and design
- **Groups:** QuestBridge Scholar; ColorStack; Duke Applied Machine Learning – Software Engineering Division; SHPE; Hack Duke

LANGUAGES & TECHNOLOGIES

- **Languages:** Java, Python, TypeScript, Rust, C, MIPS, Bash, HTML/CSS, LaTeX
- **Frameworks:** Node.js, Express.js, Spring Boot, Flask, Actix Web, React, Next.js, Flutter
- **Data & Machine Learning:** Pandas, NumPy, Scikit-learn
- **Databases:** PostgreSQL, MongoDB, SQLite, Firebase, SQLAlchemy
- **Cloud & Tools:** Amazon Web Services (AWS), Docker, Nginx, PythonAnywhere, Git, DBeaver, Wireshark, Cisco Packet Tracer

WORK EXPERIENCE

Sponsors for Educational Opportunity (SEO)

Software Engineer Intern

May 2026 – Jul. 2026

New York, NY – Remote

- Collaborated within an Agile environment to design, test, and implement full-stack web applications using **Python**, **Flask**, **SQLite**, **HTML**, **JavaScript**, and **CSS**.
- Spearheaded the development of Study Match, an MVP platform connecting students with academic resources through peer networking and GenAI-powered assistance.
- Led REST API development, database schema design, secure authentication, and CI/CD pipeline integration for the Study Match application.
- Completed 300+ hours of rigorous computer science training, mastering **data structures**, **algorithms**, and full-stack software engineering principles.

Iglesia de Dios Séptimo Día

Software Engineer Intern

Aug. 2025 – Dec. 2025

Fort Worth, TX

- Accelerated cross-platform mobile application development for iOS and Android using **Flutter**, engineering a unified church engagement interface from a single codebase.
- Integrated **Firebase Cloud Firestore** to ensure real-time synchronization of event updates and push notifications across user devices.
- Packaged and presented the finalized application to the National Board, successfully securing approval for organization-wide deployment.

Duke University Office of Information Technology

Software Engineer Intern

May 2025 – Jul. 2025

Durham, NC

- Modernized the APIARY security platform by refactoring legacy architecture into modular, highly performant **React** components using **Next.js**.
- Engineered a high-performance REST API using **Actix Web** to enable an asynchronous monitoring service for capturing and visualizing live HTTP request traffic.
- Containerized backend microservices using **Docker**, configuring a **Granian** server and **Nginx** rate limiting to ensure deployment consistency across Duke OIT environments.
- Implemented automated unit and integration testing within a GitFlow-based CI/CD pipeline to streamline development and improve software delivery reliability.

OTHER EXPERIENCE

Microsoft HOLA

Apprenticeship

Aug. 2024 – Dec. 2024

Charlotte, NC

- Architected scalable cloud-native solutions during the SHPE & HOLA NC technical apprenticeship, focusing on **fault tolerance**, **system design**, and **network architecture**.
- Engineered RESTful APIs on test projects using **Spring Boot** and deployed infrastructure on **AWS**, optimizing API endpoints for low-latency data retrieval.
- Participated in rigorous code reviews and Agile sprint cycles, adhering to industry-standard software engineering practices and version control using **Git**.