

Saad Sadouk

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EDUCATION

George Mason University

Fairfax, VA

Bachelor of Science, Computer Science - GPA: 3.5/4.0

Aug. 2021 – May 2025

- Relevant Coursework: Object-Oriented Programming (**Java**), Data Structures (**Java**), Operating Systems (**C**), Analysis of Algorithms (**Java**), Software Engineering (**React.js & Python**)

EXPERIENCE

Software Engineer Intern

Aug. 2022 – Dec. 2022

IPConfigure Inc · Internship

Norfolk, VA

- Contributed to the development of features for a web-based UI using **Angular** and **TypeScript** that enables users to store, view, and customize streams from IP cameras.
- Implemented **Java Spring Boot** backend APIs for a video surveillance system, reducing latency by **25%** and enabling seamless integration with IP camera streams.
- Designed a **Material Design**-driven interface for retention analytics, cutting data analysis time by **30%** and earning praise from the product team.
- Orchestrated migration of legacy **AngularJS** and **JavaScript** codebases to modern **Angular** and **TypeScript**, enhancing performance by **20%**.
- Authored **TypeScript** and **Jasmine** unit tests, achieving **90%** code coverage and accelerating code review cycles by **35%**.

PROJECTS

FlipAssist.app | *Next.js, TypeScript, TailwindCSS, Firebase, Stripe, Google OAuth* | ([link](#)) Mar. 2023 – Present

- Architected a full-stack web application for resellers, scaling to over **100+** users worldwide in 18 months, revolutionizing inventory management.
- Engineered a real-time dashboard with **ChartJS** visualizations, delivering critical insights into sales and profits.
- Designed a high-performance inventory system with **CRUD** functionality, slashing management time by **40%**.
- Integrated **Stripe** and **Firebase** for secure, scalable subscriptions, driving consistent revenue growth.

FrugalFinder | *React.js, Flask, SQLAlchemy, SerpAPI, JWT, Pytest, SQLite* | ([link](#)) Sep. 2024 – Dec. 2024

- Architected a robust **Flask**-based backend with **SQLAlchemy** ORM, delivering a scalable RESTful API to support price comparison and user authentication for **50+** users.
- Engineered seamless integration with **SerpAPI** for real-time product data aggregation, optimizing for low latency and handling **10,000+** daily queries.
- Designed a secure **JWT**-based authentication system, ensuring data integrity with industry-standard encryption practices.
- Led database schema design and optimization with **SQLite** (planned PostgreSQL migration), efficiently managing relational data for users and products.
- Spearheaded backend testing with **Pytest**, achieving **90%+** code coverage and reducing production bugs during sprints.

Imagen | *Next.js, TypeScript, TailwindCSS, Convex, Google OAuth* | ([link](#)) June 2023 – July 2023

- Built a full-stack **Next.js** application leveraging the **ControlNet Replicate API**, enabling AI-generated images from user prompts and sketches with over **95%** generation success rate.
- Boosted user engagement by integrating **ReactSketchCanvas** for real-time sketching and gallery features, increasing session duration by **30%** during testing.
- Optimized backend efficiency with **Convex** to streamline **ControlNet Replicate API** calls, cutting image generation latency by **40%** over baseline.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, MySQL, JavaScript, TypeScript, HTML, CSS, Stylus

Frameworks: Next.js, React.js, Angular, Node.js, Express.js, Flask, Spring Boot, TailwindCSS, Material-UI, SQLAlchemy, Convex, jQuery, Jasmine

Developer Tools: Git, GitHub, AWS, Postman, Jira, Vercel, Figma, VSCode, Linux, Firebase, Stripe, Pytest, SQLite