

Shiv Desai

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EDUCATION

Emory University

Bachelor of Science in Computer Science, GPA: 3.87/4.00

Atlanta, GA

Aug. 2021 – May 2025

EXPERIENCE

Software Engineer Intern

May 2024 – Aug. 2024

Qualitate

New York City, NY

- Built a dynamic market page dashboard using **React** displaying real-time data analytics and visualizations for over **70+** markets spanning across **8** industries, enabling clients to make informed market-specific investments.
- Presented the market dashboard to potential investors and clients, converting **5** trials and initiating discussions to secure additional contracts.
- Implemented a navigation bar mapping over **200** unique routes across the full application, ensuring smooth user interaction and data accessibility throughout the platform.
- Integrated **RESTful APIs** with **Axios** between the React frontend and **Express** backend, securing connections across **6** routes for enhanced data integrity.
- Refactored **2+** web pages and **7+** endpoints, improving web page load times by **37%** through optimized state management and fetch requests.

Data Engineer Intern

Jun. 2023 – Aug. 2023

Fiserv, Inc.

Berkeley Heights, NJ

- Developed and maintained the data infrastructure supporting an AWS usage real-time cost analysis dashboard, displaying data visualizations for **7** cost metrics for **11** different applications.
- Utilized **S3** Event Notifications and AWS **Lambda** functions to process AWS Cost and Usage Reports and populate Snowflake tables, increasing AWS cost visibility by over **50%**.
- Preprocessed AWS Usage Reports using Lambda and **Python**, powering **95%** of analytics and live cost metrics for the dashboard.
- Designed and configured the database schema architecture for a Gemfire to MySQL migration project, streamlining data transfer and improving query performance.

PROJECTS

Marginfi Liquidation Bot | Go, TypeScript

Dec 2023 – Present

- Engineered a Solana liquidation bot in **Go** to identify defaulted loans, execute liquidations, and rebalance the liquidator accounts, generating a **2.5%** profit from liquidated collateral.
- Transformed the Marginfi **SDK** from **TypeScript/Rust** to Go, utilizing deserialization, Goroutines for concurrent data fetching, and mutexes to control data flow, storing data in cache stores for efficient retrieval.

Malloc Implementation | C

Mar 2024

- Manually implemented **malloc** in **C**, incorporating chunk allocation and deallocation functionalities through pointer arithmetic, byte manipulation, and comprehensive understanding of heap memory management.
- Leveraged a linked list-based **Free Node** list management system for tracking and allocating memory chunks, replicating real memory storage optimization.

RSS Feed Aggregator | Go, PostgreSQL

Mar 2024

- Programmed a RSS-Feed-Aggregator using **Go**, leveraging **PostgreSQL** for efficient data storage and query handling, and integrated goose for database schema migrations.
- Implemented a **RESTful API** using go-chi for server management, providing user interactions through HTTP requests. Used a scraper worker to update RSS feeds, which were continuously stored in the database.

TECHNICAL SKILLS & RELEVANT COURSEWORK

Languages: Python, Java, Go, C, SQL (Postgres), JavaScript, Typescript, HTML/CSS

Frameworks and Libraries: React, Node.js, Express.js, pandas, NumPy, Matplotlib, Scikit-learn

Tools & Platforms: Git, GitHub, Linux, Supabase, PostgreSQL, AWS, Snowflake

Coursework: Data Structures, Algorithms, Systems Programming, Computer Architecture, Deep & Machine Learning, Database Systems, Spatial Computing, Discrete Mathematics, Linear Algebra, Calc 1-2