Shiv Desai

609-610-5127 | shiv.desai2@emory.edu | linkedin.com/in/shivdesai02/ | github.com/shivdesai99

EDUCATION

Emory University   Atlanta, GA
Bachelor of Science in Computer Science, GPA: 3.87/4.00   *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** triggers and CloudWatch to populate Snowflake tables with AWS Usage Report data, 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.
- Configured database schema architecture for the Gemfire to **MySQL** database migration project.

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