

Shiv Desai

shiv.desai2@emory.edu • 609-610-5127 • [LinkedIn](#)

EDUCATION

Emory University, Atlanta, Georgia

May 2025

Bachelor of Science in Mathematics and Computer Science (4.00/4.00), Fall 2023 Dean's List

GPA: 3.92/4.00

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

PROGRAMMING SKILLS

Programming Languages (Ranked in Proficiency): Go, Java, C, Rust, Python, JavaScript, TypeScript, SQL, R

Tools and Libraries: GitHub/Git, Linux, React, Solana SDK, Pandas, NumPy, AWS, Snowflake

EXPERIENCE

Data Architecture Intern at Fiserv, Inc., Berkley Heights, NJ

Jun 2023 – Aug 2023

- Oversaw end-to-end **ETL** pipeline, transforming AWS **usage costs** data, normalized with StreamSets, for **Snowflake** consumption and analysis. Concluded that recent integration of AI products **increased** AWS rent costs by **11%**.
- Contributed to the database **schema** architecture necessary for **Gemfire** to **MySQL** database migration project. Reduced operational costs annually through eliminating licensing fees and optimizing hardware utilization
- Streamlined migration database management processes, reducing maintenance overhead by over **20%** and accelerated new feature development through the adoption of widely used **SQL** standards in MySQL
- Demonstrated commitment to skill enhancement by completing **AWS** and **Snowflake** courses, bolstering architectural proficiency, and contributing to improved project results

Business Analyst Intern at Fiserv, Inc., Berkley Heights, NJ

Jan 2022 – Aug 2022

- Conducted research on the adoption of **blockchain** technology in cross-border payments among competitors, revealed a **55%** increase in transaction processing speeds, and over **20%** increase in Fiserv's customer base through global adoption
- Presented research and analysis of a hybrid **cloud migration** off the current on-prem infrastructure.
- Final findings suggest a cloud migration will lead to substantial cost savings, exceeding **\$1.2 billion dollars** over a span of 10 years, by selling data warehouse real estate, scalability, and reduced infrastructure and maintenance expenses
- Collaborated with product leads to conduct comprehensive **data governance** analyses of new product pitches, ensuring their alignment with key regulations such as GLBA, GDPR, NPI, FRCA, CCPA and KYC

NOTABLE PROGRAMMING PROJECTS

Solana Arbitrage Bot (Rust)

Jan 2024 – Present

- Implementing an arbitrage bot that pulls price quotes from different decentralized exchanges (DEXs) to quickly conduct token swaps based on the calculated **profitable** route found using a complex graph traversal algorithm
- Developing a graph data structure and efficient traversal **algorithm** to identify and pull the profitable route for an arbitrage
- Integrate a **JITO** schedule manager to continuously tip validators **Solana** to increase traction confirmation speeds

Marginfi Liquidation Bot (Go)

Dec 2023 – Jan 2024

- Developed a liquidation bot on the Solana Marginfi lending and borrowing protocol to swiftly identify defaulted loans, execute liquidations, and rebalance the liquidator accounts. Collect a **2.5% profit** of the liquidated collateral per liquidation
- Reverse engineered the Marginfi SDK in **TypeScript** to **Go** through extensive deserialization, **go routines** to concurrently fetch real-time data, context and mutexes to prevent **race conditions**, and stored data in complex structures for efficient retrieval
- Initialized a **discord bot** that notifies servers of any errors, liquidations, failed/dropped transactions through several **webhook** go routines and **channels** to keep the liquidator up to date on transactions, profits, and any required maintenance

Weather App (React)

Aug 2023

- Developed a real-time weather forecast **webapp** that tracks the forecast over the next week from any inputted location.
- Utilized Geo and Weather **REST APIs** to fetch the accurate forecast for the respective location
- Designed the app with **HTML** and **CSS** to display descriptive images of the current weather by mapping the fetched data

COMMUNITY ENGAGEMENT AND LEADERSHIP EXPERIENCE

Residential Advisor at Residential Life and Housing Operations, Atlanta, GA

Aug 2023 – Present

- Assume on-call duty responsibilities during nights, weekends, breaks, and hall opening/closing periods to ensure resident health safety and fire safety standards are met throughout campus and in residential halls
- Served as a role model and consultant for residents, demonstrating honor, humility, and helpfulness when in need
- Organized and implemented meaningful educational, co-curricular, and social initiatives aligned to support residents' holistic development as a member of Emory's community and as a student

Director of Programming Committee at Trockman Microfinance Initiative, Indiana University

Aug 2021 – May 2022

- Connected Kelley students directly to successful Kelley alumni by coordinating alumni speaker panels
- Won the semestrial Kiva's Case Competition twice by pitching the optimal levels of default, risk, and profitability rates of the Kiva loan to the club executive board and club members

ADDITIONAL SKILLS AND INTERESTS

Languages: Basic in **Spanish**; Basic in **Hindi**; Basic in **Gujrati**

Interests: Golf, Manchester United, NFL, Weightlifting, Solana Development, Crypto Investing/Airdrops, Coffee