Mazen Zarrouk

mazen.zarrouk2@gmail.com | (347) 283-7701 | Brooklyn, NY 11235
https://github.com/Mazen-Z | https://www.linkedin.com/in/mazen2

EDUCATION

Grove School of Engineering at the City College of New York   **05/2025**
Bachelor of Science in Computer Science
- **Relevant Courses**: Algorithms, Data Structures, Operating Systems, Software Engineering, Software Design in Java, Theoretical Computer Science, Object Oriented Programming in C++, Probabilities, Statistics, Discrete Math, Linear Algebra, Calculus 1-3.

SKILLS

- **Languages**: C++, Java, JavaScript, HTML, CSS, SQL, Python, Git
- **Technologies**: Visual Studios, MySQL, IntelliJ, Oracle VM VirtualBox, AWS, Google Cloud, Next.js, React.js, GitHub

EXPERIENCE

The Difference, Scarsdale, NY
Backend Engineering Intern   **06/2023 - 08/2023**
- Designed and implemented new normalized database schema for health startup using MySQL, reducing data duplication by over **eighteen percent** across eight core tables.
- Led a team to develop macro nutrition tracking feature, delivering under deadline.
- Designed schema changes, wrote migration scripts, and validated data integrity. Built daily aggregated results table cutting report generation time from two minutes to **five seconds**.
- Migrated legacy data from five key tables into new schema with **zero percent data loss** using optimized INSERT/UPDATE queries. Improved food table query performance by **twenty-two percent** and lowered storage by removing **ten** unused columns through optimizations.
- Implemented highly requested routines table for users to build workout plans with linked steps. Presented ERD diagrams and proposals to the **CTO**, influencing future roadmap of the startup.

Google Software Engineering Program (G-SWEP), New York, NY   **03/2023 - 05/2023**
- Worked one-on-one with a Google software engineer for **10 weeks** to solve complex coding challenges, strengthening skills in arrays, strings, recursion, and other algorithms.
- Gained insider knowledge of Google's engineering culture through immersive workshops, learning about perks, business units, hiring practices, and technical interview techniques.
- Built connections with Google employees while acquiring valuable insights into succeeding in the company's unique interview process.
- Significantly expanded technical abilities and interview preparation through coding problems and mentor guidance.

PROJECTS

Yapper – Social Media Web Application   **10//2023 - 12/2022**
- Led a 5-developer **agile full stack** team to deliver a functional **minimum viable product** matching key Twitter features within a 2-month timeframe.
- Engineered **core functionalities** enabling users to post messages, follow other users, like and comment on posts facilitating community engagement.
- Constructed reusable **React components** like user profiles and post cards enhancing developer productivity.
- Designed Supabase **database schema** to store user data, posts, followers, and interactions. Implemented **authentication** for users to securely sign up and login to the application.

JavaFX Shape Visualization and Database Management Project   **11/2022 - 12/2022**
- Implement **Object-Oriented Programming** principles for accurate geometric calculations, including area, perimeter, and radius of circles and ovals.
- Developed **a JavaFX**-based tool, showcasing shapes with **dynamic rendering** and interactive manipulation features.
- Integrated MySQL database connectivity using JDBC for efficient data management, schema creation, and CRUD operations.