

ISHRAQ BASHER

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EDUCATION

New York University, Tandon School of Engineering

May 2027

Bachelor of Science in Computer Science | Minors: Mathematics & Data Science

New York, NY

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Computer Architecture, Software Engineering, Object-Oriented Programming, Discrete Mathematics, Probability & Statistics, Linear Algebra, Multivariable Calculus, Data Analysis

TECHNICAL SKILLS

Languages: Python, C++, Java, JavaScript, SQL, TypeScript, C#, HTML/CSS, Bash, Go, Swift

Frameworks & Libraries: FastAPI, PyTorch, TensorFlow, Flask, React.js, Node.js, Tailwind CSS, Bootstrap, Kafka, WebSockets

Tools & Technologies: Redis, PostgreSQL, MongoDB, MySQL, SQLite, Git, Docker, AWS, OpenCV, Kubernetes, Rancher, SvelteKit

EXPERIENCE

Rivian

Normal, Illinois

Software Engineer Intern

May 2026 – Present

- Architected a high-performance communications module in **Java** utilizing the **Ignition SDK** to facilitate robust, concurrent data exchange between distributed software systems and external hardware.
- Designed a highly available, automatic failover mechanism deployed and orchestrated via **Kubernetes (Rancher)** that monitors system heartbeats to detect service degradation and seamlessly reroutes traffic to backup communication drivers.
- Built a real-time, event-driven notification pipeline using **JNats (NATS messaging)** to cache active system state changes and synchronize high-frequency registration transactions directly to the database.

SEO (Sponsors for Educational Opportunity)

Remote

Tech Developer Intern

May 2026 – Present

- Built and evaluated scalable, **enterprise-level system designs**, focusing on fault-tolerant distributed networks and high-throughput data processing.
- Engineered a distributed rate-limiting service utilizing **Redis** and **token bucket algorithms** to prevent API throttling and ensure high availability under peak load.
- Optimized relational database schemas in **PostgreSQL** by implementing compound indexing and query pagination, reducing read latency by **45 percent** for high volume datasets.

Fox

New York, NY

Software Engineer Intern

Jun. 2025 – Aug. 2025

- Engineered an end-to-end automation system using **Google Apps Script** and **JavaScript** that parsed and synchronized 50+ show documents, reducing manual content tagging time by **80%**.
- Built backend scripts integrating Fox One's internal API to standardize show metadata across multiple platforms.
- Designed a reusable execution framework for future show seasons, improving maintainability and developer onboarding.

New York University

New York, NY

Introduction to Engineering & Design Teaching Assistant

Aug. 2024 – Present

- Served as Deputy of the Web Development Committee, managing and deploying a **LAMP** stack course platform on Google Cloud Platform for 500+ users while developing a full-stack migration to **Express, React, and SQL**.
- Assisted students with technical projects using **Arduino, C++, and Python**, providing guidance on debugging firmware/software, and collaborated with 70+ teaching assistants to ensure consistent grading standards and smooth lab operations.

PROJECTS

Linguify | Python, JavaScript, React, Vite, Flask, SQLAlchemy, Spotify Web API, OAuth 2.0, DeepL

- Built a full-stack web app (React, Flask) that turns Spotify songs into interactive, line-by-line language lessons.
- Designed a REST API unifying four external APIs (Spotify, DeepL, LRCLIB, Deezer) with automatic failover and caching.

Watchtower | Go, SvelteKit, TypeScript, Apache Kafka, TimescaleDB, PostgreSQL, Redis, WebSocket

- Developed a real-time platform (Go, SvelteKit) that flags stock-volume anomalies and links them to news sentiment.
- Engineered a Kafka pipeline streaming alerts over WebSockets, with tick ingestion into a TimescaleDB hypertable.

AlgoRhythm | Swift, SwiftUI, AWS AppSync, Lambda, DynamoDB, Cognito, AWS CDK, TypeScript

- Shipped a native iOS app (Swift/SwiftUI) for interview prep with swipe-and-flip flashcards and adaptive difficulty.
- Architected an offline-first, serverless AWS backend (Cognito, AppSync GraphQL, Lambda, DynamoDB) via AWS CDK.