

# Waffy Ahmed

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## Education

### Georgia Institute of Technology | Atlanta, GA

Bachelor of Science in Computer Science

December 2024

Faculty Honors, Dean's List, Zell Miller Scholar

## Experience

### Software Engineer

*The Home Depot*

January 2025 – Present

Atlanta, GA

- Improved scalability by deploying and validating HPA for a core service previously limited to 20 static pods, cutting mean latency 40% (121 to 72 ms) and errors 89% while boosting throughput 40% (24.9M to 34.8M reqs/wk) and reducing average CPU usage 26%, enabling dynamic scaling between 50–100 pods in production.
- Reduced MTTR ~50% by implementing an automated rolling-restart Kubernetes job for 20+ microservices, eliminating slow Argo Rollouts sequences and accelerating recovery from memory-leak and state-drift issues.
- Reduced production incidents by 20% via implementing OpenTelemetry tracing across 9 Java-based microservices, enabling early issue detection through standardized distributed tracing and centralized observability.
- Resolved critical transaction processing/lookup issues across 500+ stores, collaborating with cross-functional teams and leveraging Cassandra, Elasticsearch, Java, BigQuery and Postman to maintain ~100% service availability.
- Validated fault tolerance via automated chaos experiments (SIGKILL terminations, CPU/memory overloads, and simulated network loss/latency) while stress testing via k6, uncovering and resolving bottlenecks in key services.

### Software Engineer Intern

May 2023 – July 2023, May 2024 – July 2024

*The Home Depot*

Atlanta, GA

- Developed an internal product information page for cashiers, streamlining self-checkout processes and reducing customer wait times for associate interventions by ~25%.
- Leveraged Java to obtain germane product data, used React and TypeScript to effectively display product information for all registers at self-checkout, pruning customer theft by ~\$750,000 annually.
- Optimized the efficiency of configuring 40,000+ registers across 2,300 stores by 90%, in collaboration with 2 interns.
- Truncated the maximum deployment time of updates to registers from 24+ hours to 30 minutes, leveraging the HttpClient and Flow Java libraries to streamline the retrieval of polymorphic external configurations.

### Firmware Engineer Intern

May 2022 – August 2022

*Landis+Gyr*

Alpharetta, GA

- Accelerated the process of converting DCW (Data Control Words) hexadecimal values to their corresponding ASCII representations by ~50% through efficient Python practices.
- Bolstered data transmission efficiency by ~25%, collaborating with a software architect to conduct comprehensive testing of collectors and debugging of various Python scripts employing MySQL.

## Projects

### Fintech @ Georgia Tech | *React, React Native, TypeScript, Stripe API, Chakra UI*

- Reduced page load times by ~35% via transforming a multi-page credit card website into a React-based single-page application, streamlining card wallet management and adding a card removal feature for authenticated users.
- Implemented a cart page for a React Native grocery application, allowing users to add/remove items, adjust quantities, view real-time total costs, and integrated the Stripe API for streamlined in-app credit card payments.

### CDC Data Reconciliation | *Python, FastAPI, SQLite, React, Tailwind CSS*

- Oversaw a team of 6 to automate the reconciliation of case counts for infectious diseases between 50 state health departments and the CDC, alongside doubling as a full-stack software developer.
- Utilized Python to compare state health department and CDC data, highlighting any discrepancies between the two datasets, saving 5000+ hours of manual reconciliation annually.

## Skills

**Programming Languages:** Java, Python, JavaScript, TypeScript, SQL

**Technologies/Frameworks:** SQLite, Cassandra, Elasticsearch, BigQuery, Google Firebase, React, React Native,

Node.js, Next.js, Express.js, Postman, Docker, Git, JUnit, Jest, Kubernetes, GCP, Terraform, Prometheus, PromQL

**Concepts:** Object-Oriented Programming & Design, Test-Driven Development, NoSQL, Data Structures & Algorithms

**Interests:** Full-Stack, CI/CD, Infrastructure, Distributed Systems, Cloud Computing, Microservices Architecture