

Waffy Ahmed

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Education

Georgia Institute of Technology | Atlanta, GA

December 2024

Bachelor of Science in Computer Science

Faculty Honors, Dean's List, Zell Miller Scholar

Experience

Software Engineer

January 2025 – Present

The Home Depot

Atlanta, GA

- Automated Spinnaker deployment pipelines for 10+ microservices with cdk8s, utilizing TypeScript, Terraform, and Google Cloud Platform for production and non-production environments, reducing deployment times by 25%.
- Implemented tiered alerting and configured Grafana dashboards for 20+ microservices, providing real-time visibility into system health and performance metrics, along with leveraging Slack for routine notifications/warnings and PagerDuty for critical issues, reducing acknowledgement time for alerts by 15%.
- Resolved critical transaction processing issues across 500+ stores, collaborating with cross-functional teams and leveraging Cassandra, Elasticsearch, Java, BigQuery and Postman to maintain ~100% service availability.
- Led testing and validation efforts for enabling/disabling a legacy service using BigQuery and Postman, reducing CPU usage for booking transactions by 50% and ensuring seamless functionality during its phased retirement.
- Reduced lookup latency by 5% in a high-throughput system processing 4.5 million transactions per day by implementing scalable Elasticsearch indexing strategies in Java.

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 ~\$10 million 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

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.
- Procured feedback from CDC computer scientists and representatives from 25+ state health departments via application demonstrations and integrated the suggested modifications.

Job Search Aid | *Kotlin, Google Firebase, Cloud Firestore, Adzuna API, XML*

- Developed an Android application using Kotlin that fetches tailored job listings via the Adzuna API and provides job-search resources (e.g., FAQs and resume templates), helping users streamline their job search.

Skills

Languages: Java, C#, C++, C, Python, Kotlin, JavaScript, TypeScript, HTML, CSS

Technologies/Frameworks: SQLite, Cassandra, Elasticsearch, BigQuery, Google Firebase, React, React Native, Node.js, Next.js, Express, Postman, Docker, Git, JUnit, Jest, Kubernetes, GCP, Terraform, PromQL

Concepts: Object-Oriented Programming & Design, Data Structures & Algorithms, Test-Driven Development, NoSQL, SQL, Game AI, Backend, Frontend, Agile, Scrum, Data Visualization/Analysis, Human-Computer Interaction, Computer Architectures & Graphics, Video Game Design, CI/CD, Applied Combinatorics, Web/Mobile Application Development