Mazen Bahgat

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Professional Summary

Proficient software engineer with **2+** years of experience and expertise in core design principles, testing, and implementation. Adaptable and self-driven, demonstrating the capacity to rapidly acquire and implement new technologies and methodologies. Applied strong technical and collaborative skills through the completion of **10+** self-initiated projects.

Experience

Microsoft   **May 2024 - July 2024**
Software Engineering Intern   *Redmond, WA*
- Engineered event-driven features in Dynamics CRM to streamline data center lease acquisition workflows, improving transparency and reducing operational costs by **75%**.
- Transitioned service authentication from client secrets to Managed Service Identity (MSI), enhancing security and reducing maintenance overhead by automating credential management.

NCR Voyix   **January 2024 - April 2024**
Software Developer   *Waterloo, ON*
- Developed a proxy server facilitating secure collaboration between remote tellers and clients, serving encrypted cloud static content to **600+** financial institution branches and **1000+** tellers.
- Optimized bank teller UX, empowering clients to execute pivotal operations, like secure money transfers and interbranch chash shipments, by implementing real-time data streaming through WebSockets and reducing latency by **99.9%**.

Microsoft   **May 2023 - August 2023**
Software Engineering Intern   *Redmond, WA*
- Migrated legacy dependencies to OpenTelemetry SDK, ensuring compliance with engineering excellence standards and mitigating security vulnerabilities.
- Designed and implemented upstream system integration for data center lease acquisition applications, automating workflows and reducing manual processing costs by **50%**.

NCR   **September 2022 - April 2023**
Back-End Developer   *Waterloo, ON*
- Built containerized banking microservices using Spring Boot, and NodeJS, improving scalability and deployment efficiency.
- Optimized client-hardware communication for Teller Cash Recycler machines, reducing transaction processing by **66%**.

Scales Nature Park   **May 2022 - August 2022**
Full Stack Application Developer   *Oro-Medonte, ON*
- Directed a team to design and develop MERN stack-based mobile and desktop applications, supporting wildlife conservation initiatives.
- Collaborated with management and end-users to gather and prioritize application feature requirements, ensuring alignment with conservation goals.

Technical Skills

- **Languages**: C, C# (.NET), Java (Spring Boot), TypeScript (NodeJS, NextJS, React Native), Python, Shell Script.
- **Tools**: MongoDB, Event-Driven (Kafka, Azure Service Bus), Firebase, Power Platform, REST APIs, Docker, Azure.
- **Techniques**: Distributed Systems Architecture, SOLID Design Patterns, Database Sharding & Replication, Agile.

Projects

Plant Together | *React, NodeJS, PSQL, Firebase, Socket.io*   **January 2025 - April 2025**
- Empowered **50+** software architects to collaborate on PlantUML diagrams in real-time using a WebSocket solution.
- Secured client architecture artifacts with a robust access control system powered by Firebase authentication.

SVG Parser Web Application | *C, HTML, CSS, JavaScript*   **January 2022 - March 2022**
- Developed an interactive web GUI to facilitate seamless data exchange between users and the server.
- Built core SVG parsing library in C, adhering to strict API specifications and maintaining **zero** memory leaks.

Education

University of Guelph   **September 2020 - April 2025**
Bachelor of Computing, Honors Co-op Major Software Engineering Minor Marketing   *Guelph, ON*