Ahmad Alsabbagh

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EDUCATION

University of Toronto — Toronto, ON
Honours Bachelor of Science — *9/2017 – 4/2023*

- Specialization (Double Major): Computer Science
- Awards: Entrance Scholarship, Dean's List candidate

EXPERIENCE

Coalition, Inc. — Toronto, ON
Software Engineer, Carriers and Accounts — *5/2024 - Current*

- Designed and implemented a reporting pipeline using AWS Kinesis to capture OpenSearch matching scores and outcomes. Integrated data into Snowflake for analysis, enabling fine-tuning of OpenSearch algorithm. This streamlined mapping of internal account data to organizational entities, improving insurance risk assessment based on company history and affiliations.
- Designed and developed a suite of Golang gRPC API endpoints to enable creation, updating, merging, splitting, and retrieval of organizational entities. These APIs enhanced internal tooling, allowing the operations team to manually refine and improve the accuracy of organizational entity data.
- Designed and implemented a scalable, event-driven service workflow using AWS Lambda, enabling high-throughput event consumption and production. Optimized query performance to handle a large volume of requests per second, ensuring reliability and efficiency in a high-demand environment.
- Contributed to the migration of the Authorization Platform from Casbin to OpenFGA by designing and implementing scalable OpenFGA models for internal entities such as brokers, users, and insurance accounts. Enhanced the company's access control capabilities, enabling more complex and scalable authorization structures.

Flipp Corporation — Toronto, ON
Software Engineer, Content Layer — *5/2023 - 5/2024*

- Designed and launched a scalable API service on AWS EKS to deliver real-time push updates, enabling retailers to dynamically manage Flipp platform content based on in-store stock. This provided missing locality-specific data, driving a 250% increase in user engagement, with Walmart as the first onboarded retailer.
- Led and implemented a user interface project to improve monitoring and maintainability of the content ingestion layer. Automated routine engineering tasks, preparing the system for a 100x increase in data volume while enhancing operational efficiency.
- Analyzed and optimized Kafka infrastructure, achieving a 50x improvement in publishing efficiency for key workflows, ensuring scalability and reliability.
- Optimized concurrent job performance in primary job scheduling service by introducing partitioned query jobs, preventing deadlocking conflicts during high-volume database operations. This enhancement significantly improved throughput and scalability for simultaneous job processing.

Meta Platforms, Inc. — San Francisco Bay Area, CA
Software Engineer Intern, Client Platform Engineering — *06/2022 - 08/2022*

- Engineered a robust Hacklang and Intune pipeline, effectively monitoring policy installation metrics across a massive Windows device fleet.
- Delivered pivotal insights leading to the resolution of a Sev1 issue, empowering informed decision-making for teams and stakeholders.
- Pioneered a pipeline integrated with source control, optimizing the management of scripts, policies, applications, and configurations.

- ○ Established ownership tracking within Intune, addressing critical gaps and enhancing efficiency.

- **Flipp Corporation** Toronto, ON
  Software Engineer Intern, Content Collection Team *5/2021 - 4/2022*
  - ○ Received the CEO's Choice Award during a company-wide hackathon for an innovative Chrome extension designed to streamline online product comparisons and empower users with cost-saving insights.
  - ○ Elevated product labeling precision with Google Product Categories, amplifying product search accuracy and enhancing end user experiences.
  - ○ Orchestrated and maintained newly integrated data collection systems, instrumental in securing $1 million revenue via Flipp Brand Partnership Campaigns.
  - ○ Implemented memory optimization strategies within Ruby microservices, resulting in cost reductions and reduced operational alerts by 33%.
  - ○ Streamlined the onboarding process for new retailers onto data collection systems, augmenting Flipp Ad Campaign content and extending platform reach.
  - ○ Strategically navigated RESTful and GraphQL API endpoints across diverse retailers, optimizing data collection while ensuring integrity and reliability.
  - ○ Leveraged Confluent Kafka, MySQL, and Redis to optimize data flow, amplifying downstream service efficiency and system performance.
  - ○ Collaborated cross-functionally to continuously fortify data collection systems, driving improvements aligned with stakeholder objectives.
  - ○ Utilized Ruby on Rails, JavaScript, HTML, and CSS to implement user web-interfacing features.
  - ○ Revamped onboarding procedures and decreased daily manual developer tasks by crafting comprehensive documentation, boosting productivity.

- **SOTI Inc.** Mississauga, ON
  Software Engineer Intern, Android Team *9/2019 - 6/2020*
  - ○ Spearheaded a migration effort off old dependencies, enhancing service security.
  - ○ Utilized Java to build features via test-driven development for varied Android versions.
  - ○ Utilized Python to build REST APIs.
  - ○ Conducted substantial refactoring, elevating codebase maintainability within client-facing applications.

- **University of Toronto** Toronto, ON
  Teaching Assistant, CSC209: Software Tools and Systems Programming *1/2021 - 4/2021*
  - ○ Software techniques in a Unix-style environment, using scripting languages and the machine-oriented programming language, C. Core topics: creating and using software tools, pipes and filters, file processing, shell programming, processes, system calls, signals, basic network programming.
  - ○ Facilitated weekly lectures, elucidating core concepts and addressing student inquiries.
  - ○ Assisted professors in conducting lectures by actively engaging with student queries.

SKILLS

- **Languages**: Go (Golang), Ruby, Python, Java, JavaScript (Node.js), TypeScript, SQL, Hack (Hacklang)
- **Technologies**: Kafka, Git & GitHub, Docker, Kubernetes, Amazon Web Services (AWS), MySQL, PostgreSQL, Redis, Jenkins, CircleCI, GitHub Actions
- **Frameworks**: Ruby on Rails, Flask, Express, Node.js, Django