Jin Fan

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Education

Western University — Ontario, Canada
Masters in Data Analytics — *2019 – 2020*
B.M.Sc in Biochemistry of Infection and Immunity — *2015 – 2019*

Work Experience

Laserfiche — Toronto, Ontario
Software Engineer – Product Engineering Team — *2022 – Present, Full-time*

- Led the migration of our **AWS EC2** containers to **AWS EKS** using **Kubernetes** to improve scalability while reducing costs. Monthly AWS expenditure was reduced by a 5-figure dollar value and no outages have occurred to date.
- Took ownership of two **C#** microservices and improved the performance of client-facing actions when run against a large number of users (10,000 to 30,000). **Reduced latency for users by 93%** by utilizing bulk database reads and writes to minimize time-intensive operations.
- Created **REST API** endpoints using **Typescript** and **C#** to serve client requests on our account control system. Rigorous unit, functionality, and webapi tests were used for monitoring the endpoints, and they currently have a success rate of **98% over the last 6 months**.
- Initiated and executed a project to overhaul all user dialogues in our client-facing application using **Angular** and **Typescript**. Resulted in reusable and extensible components that improved the developer experience, which lead to the creation of user stories to refactor other front-end components in the same manner.
- Identified performance bottlenecks in our services using **Kibana** logs and **Grafana** dashboards after observing unexplained spikes in CPU and Memory usage in the Test environment. Findings were presented to the team, and was tasked with resolving the bottlenecks which resulted in a **60% reduction in memory leaks**.

Software Engineer – Product Intelligence Team

- Developed and maintained **AWS Lambda** ETL functions to monitor product usage, capture events in **DynamoDB**, process data, and store data in **Redshift**. Designed architecture with reliability in mind, incorporating fallback strategies for failed events and enabling real-time error alerts across environments.
- Designed and implemented a user feedback feature for our flagship platform, enabling attachment of image and GIF files. Leveraged **AWS Redshift** for data storage, with a fail-safe mechanism for capturing failed instances in an **S3 bucket** for future reprocessing. Feature had a **success rate of 100%** over the last 6 months with no feedback messages lost.
- Created internal web applications using **Angular** and **Flask**, enabling non-technical users to track their events in Redshift via drop-down menus. Managed the deployment within **Docker** containers, leveraging **Nginx** as the reverse proxy for efficient application delivery.

City of Toronto — Toronto, Ontario
Software Developer — *2021 – 2022, Full-time*

- Developed and implemented **Python** scripts to automate the quarterly extraction of recreation program performance metrics, transitioning away from manual SQL queries. This automation reduced human error and decreased analysis times by **90%**.
- Engineered and maintained analytical visualization dashboards using **Plotly**, leading the project from conception to deployment. Optimized data accessibility and significantly minimized ad-hoc data requests by **over 80%**.
- Collaborated with city planners, managers, and directors to advocate for the integration of analytical dashboards, enhancing data-driven decision-making across departments. This initiative led to **division-wide adoption of dashboards**.
- Led a project analyzing cell phone usage data with **Python** to monitor changes in park visitation patterns during the COVID-19 pandemic. My findings informed division directors, driving actionable insights for park maintenance improvements.

Doxim Solutions — Markham, Ontario
Software Developer — *2020, Internship*

- Developed pattern recognition software, streamlining the conversion process of legacy **PowerShell scripts** into concise and reusable **C# components**. This significantly reduced manual effort, enhanced code maintainability, and promoted codebase modernization.
- Extracted, transformed, and analyzed credit union user data from internal databases using **SQL** queries. The insights derived from this analysis contributed to strategic decision-making processes.
- Spearheaded the design and implementation of a dynamic **C# data pipeline**, facilitating seamless integration with a third-party database. This initiative improved the usability reliability, and performance of internal data flow.

Technical Skills

Programming Languages: Python, Javascript, Typescript, C#, SQL, C, Bash, PowerShell

Frameworks: React, RxJS, Angular, Entity Framework, Vue, Express, Flask

Tools & Technologies: AWS, Node, Kubernetes, Docker, Nginx, Kibana, Grafana, ElasticSearch