Tyler Adams

tjadams@uwaterloo.ca - tjadams.ca - github.com/tjadams - C#, Java, JavaScript

WORK EXPERIENCE

Microsoft   Aug 2018 - Present
Software Engineer   Bellevue, WA

- Specialized in full-stack web development and distributed systems on the Microsoft Advertising team
- **Led UI development** for a feature that improves Shopping Campaigns. Coordinated with 4 engineers across 2 time zones (Beijing and Seattle) and drove API discussion meetings to ensure the backend met the requirements of the frontend (JavaScript, React, selenium-webdriver)
- Developed the UI for advertising features such as: Website Exclusion Lists, Manual Bidding Deprecation, Feeds, and Dynamic Search Ads (JavaScript, Knockout.js, Pug.js, React, selenium)
- Analyzed API call patterns for creating and updating ads. Optimized T-SQL procedures and called them via the C# backend which **reduced P90 latency by 30% (~250 ms) on 30+ million calls per day**
- Designed and coded the data migration for advertiser targeting data critical to the business which **migrated 10s of gigabytes of production data with no data loss** or customer escalations (C#, T-SQL)
- Implemented backend APIs, stored procedures, database schema changes, and the UI for the Cookie-based Experiments advertising feature (C#, T-SQL, JavaScript, React)
- **Owned a distributed system** ("Task Engine") responsible for scheduling, offline processing, and management of 100s of types of advertiser tasks such as generating reports to measure ad performance
- Maintained the system via backend and DB code changes as well as on-call shifts which resulted in supporting ~3000 SQL stored procedure executions per second, 99.9% availability, and an average API call latency of less than 1 second (C#, T-SQL)
- **Owned a cluster of 25 Azure SQL DBs** partitioned over multiple servers in production. Developed stored procedures and improved performance by modifying table schemas and indexes (T-SQL)
- **Debugged and mitigated production incidents** caused by availability and latency problems on backend servers and DBs. Analyzed SQL query plans to fix memory, I/O, CPU, and latency issues
- Coded and deployed data hotfixes to test and production environments to correct data issues (T-SQL)

SKILLS

Proficient with: C#, JavaScript, React, T-SQL, HTML, CSS, Java, Git, SQL Server, Azure SQL Database
Familiar with: Knockout.js, Pug.js, gulp.js, selenium-webdriver, jQuery, Underscore.js, Node.js, Backbone.js, .NET Core, .NET Framework, Azure Cloud Services, Azure Blob Storage, Azure Table Storage, Azure DevOps, Powershell, Kusto QL, Spring Framework, Python, C++, Android, RabbitMQ

EDUCATION

University of Waterloo   Graduated June 2018
B.A.Sc. in Computer Engineering (Co-op program)   Waterloo, ON

- Gained **2 years** of software engineering internship experience across 6 internships during co-op terms
  - 2 internships at Amazon, 1 at Microsoft, Thalmic Labs, Virtual Power Systems, and Rogers
- Attended 10+ collegiate hackathons hosted by Major League Hacking among others. Hackathons included: Hack the Planet (invite-only for top collegiate hackers), Hack the North, and more

SIDE PROJECTS

Blog – http://tjadams.ca   2014 - Present

INTERNSHIP EXPERIENCE

Microsoft   Sept – Dec 2017
Software Engineering Intern   Bellevue, WA
- Created a tool that **aggregated millions of rows of telemetry data** from Bing Ads Editor into sequences of features by inputting the data into a state machine and priority queue. The output of this tool **found the common behavior and anomalies of 60% of monthly active users** (C#, Kusto QL)

Amazon   Jan – Apr 2017
Software Development Engineering Intern   Santa Cruz, CA
- Designed and implemented the predictive downloading and caching feature of the Amazon Seller Android app which **reduced latency by an average of 31% (902 ms)** (Android, Java)
- Manual and functional testing resulted in the deployment of code to ~2,000,000 users without bugs

Amazon   May – Aug 2016
Software Development Engineering Intern   Seattle, WA
- Built an internal website which enabled content on Amazon Vendor Express to be edited by product managers, and **reduced deployment time from 5 days to ~5 minutes** (JavaScript, HTML, CSS, Java)
- Coded APIs to read and write to AWS DynamoDB (Java, Spring Framework)

Virtual Power Systems   Sept – Dec 2015
Backend Engineering Intern   Santa Clara, CA
- Developed a data center simulator which tested power distribution software (Scala, Akka)
- Achieved high concurrency and performance by simulating components of a data center with Actors
- Updated power distribution software by writing a script to remotely replace Docker images (Bash)

North (formerly Thalmic Labs, acquired by Google)   Jan – Apr 2015
Software Engineering Co-op   Kitchener, ON
- Implemented the overlay used in Myo for Presentations on Windows and macOS (C++, Qt)
- Created games that demonstrated the Myo armband's gesture control capabilities (C#, Unity3d)

Rogers Media   May – Aug 2014
Mobile Developer Intern   Toronto, ON
- Coded the Sportsnet Google Glass app which included NHL game scores, videos, and radio (Android)
- Developed a new version of the Rogers radio apps with a new UI design (Android, Java)
- Built an app for the Samsung Tizen watch (HTML, CSS, JavaScript)