

Mohaimen Khan

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EXPERIENCE

Senior Software Engineer | Microsoft Corporation - GitHub Copilot for Visual Studio | Seattle, WA | August 2022 - Present

- Developed and implemented a *patent-pending* semantic context solution to reduce Azure OpenAI LLM hallucinations by 17.6% across 500 unique contexts scenarios, improving AI answer quality with a 10% improvement from the baselines.
- Designed and developed a universal storage library using Azure Blob Storage and [perfect hashing algorithm](#), reducing data ingestion time from 24 hours to 1 min for over 1 billion items and enabling seamless scalability for enabling indexing on Azure DevOps repositories.
- Enhanced client usage performance for code indexing requests on the backend services through caching mechanisms and removing redundant API calls, which reduced the number of API calls by 4-5 per request and improved system responsiveness by reducing latency.
- Enhanced system security by deploying Azure RBAC for storage access and transitioning to managed identities for Key Vault access policies, reducing unauthorized access risks and streamlining access management.
- Optimized DRI time to investigate and address issues by creating investigation dashboards and automated bucketing of incidents, which led to improving the frequency of API calls and enhancing the overall efficiency and reliability of the system.

Software Engineer | Amazon - Amazon Learning Products | Seattle, WA | November 2021 - July 2022

- Developed and implemented the infrastructure for API Gateway, leveraging AWS-CDK resources, allowing 3 million Amazon-Learn users to onboard and access downstream microservices for a SaaS Learning Management Systems product.
- Implemented authentication and lead efforts to implement custom authorization models on top of the API Gateway service using TypeScript, AWS Cognito, and IAM roles allowing development of secured authentication, multi-tenancy, and role-based authorization.
- Developed and deployed a frontend application, using React, TS and AWS pipelines, to optimize costs of a 3rd party learning software which saves Amazon over \$4 million annually, a 30% savings compared to the previous model.

Software Engineer | Microsoft Corporation - Windows Packaging Service | Seattle, WA | August 2020 - November 2021

- Implemented and extended features on the windows packaging and servicing API, which packaged, validated and shipped out windows updates to more than 1.5 million client every 2 weeks.
- Implementing geo-redundant services with Azure IaaS and Service Fabric, resulting in a more reliable and scalable update process which allowed continuous packaging and validation of windows updates.
- Designed and implemented an internal .NET service to automatically rotate and update certificates on legacy on-premises servers, reducing service downtime from 2 hours to less than 30 seconds and significantly improving system availability.
- Facilitated a seamless transition to next-generation cloud services by implementing interfaces for on-premises servers containing Windows updating packages while achieving 0% downtime and ensuring uninterrupted service for customers.

Amplify Software Developer Intern | Royal Bank of Canada | Toronto, ON | May 2019 - September 2019

- Developed a rental web application using PSQL, Express.js, React.js and Node.js on RBC's rent platform (GetDigs), which analyzed the price, location and amenities to match users with 1800 dissemination areas.
- Developed and [patented](#) a rental bidding algorithm using Python and statistical methods to calculate confidence intervals, achieving an 80% prediction accuracy for rental prices and bidding values, thereby assisting users in securing locations across Canada.
- Conducted over 60 user interviews to identify pain points and gathered feedback, leading to the development of features that directly addressed user needs around payments around rental market and improved overall user satisfaction.

EDUCATION

Bachelor of Applied Sciences, Computer Engineering, Engineering Business Minor | University of Toronto | Minor in Business Minor

Toronto, ON | 2020

- \$10K Jeffery Skoll Scholarship | \$5K IEEE Canadian Foundation Scholarship | \$5K President's Scholarship

SKILLS

Programming: C, C++, C#, Java, Python, TypeScript, JavaScript, Node.js, Ruby, HTML, CSS

Frameworks: React.js, Express.js, Ruby-on-Rails, .NET

Database: PostgreSQL, MongoDB, Firebase, Cosmos DB