Matthew Bunce

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Skills

Programming Languages: C, C#, Go, Python, Rust, Swift, JavaScript, HTML, CSS, SQL
Frameworks & Libraries: React, React Native, Angular, Vue, Node.js, .NET, fastAPI, Tailwind CSS, Bootstrap
DevOps & Tools: Docker, Amazon Web Services, Azure, Google Cloud Platform, PowerBI, Git, Terraform

Experience

Software Engineer II October 2024 - Present
Desire2Learn *Waterloo, ON*

- Designed fault-tolerant AWS architecture leveraging SWF workflows, multi-region RDS clustering, and elastic load balancing to migrate a similarity detection system globally, achieving 75% stability improvement.
- Proactively led the upgrade of team-managed AWS PostgreSQL databases to version 14.15, preventing projected cost increases of 100%, while improving operational reliability.
- Maintained Brightspace Extensions, a framework for injecting custom JavaScript into the LMS (Learning Management System), enabling scalable client-specific enhancements and integrations.
- Facilitated architecture discussions and implemented secure service users to enable machine-to-machine communication and scoped permissions within the LMS, streamlining automation and integration workflows.
- Designed scalable AWS infrastructure using Terraform, implementing Infrastructure as Code (IaC) best practices to enable automated, repeatable deployments and reduce manual configuration errors.
- Developed and maintained robust, public-facing REST APIs using C# (.NET), supporting thousands of external users and integrating authentication, validation, and logging to ensure high reliability, performance, and security.
- Utilized Ruby to connect Workato's automation platform with our LMS, allowing customers to automate user enrollments, grade updates, course creation, and other workflows.
- Maintained integrations with Google Analytics, Microsoft OneDrive, and Google Drive, gaining hands-on experience with Azure and GCP while ensuring reliability and performance across Brightspace's third-party services.

Software Engineer and Data Analyst February 2023 - September 2024
MDA Space *Brampton, ON*

- Created new paginated reports using Power BI and optimized legacy Infor Reports reducing load time by 75%.
- Revitalized legacy web services written in Visual Basic and C# to reduce response time 17x.
- Led development of the Sourceday API integration utilizing Informatica which communicated sensitive supplier and purchase order information within our on-premises infrastructure servicing up to 7500 API calls a day.
- Utilized .dotPeek to decompile legacy C# executables, restoring lost code and promoting Git best practices.
- Prototyped new applications leveraging Azure Functions for scalable backends and React, TailwindCSS, and Kendo UI for the frontend, including the development of a React template for consistent design across applications.
- Migrated four legacy applications to a new security service, enabling the retirement of the old service and centralizing application security to a single API across MDA Canada.
- Spearheaded the continuous maintenance and enhancement of a mission-critical legacy C# ASP.NET MVC application, relied upon daily by a sizable user base of over 2000 employees across Canada.
- Developed and implemented SQL scripts which migrated user accounts and sharded 10 databases. This enabled a successful data migration process and facilitated the retirement of six 2008 SQL Servers.

Application Developer May 2022 – January 2023
Computer Talk *Markham, ON*

- Coordinated with sales team to develop custom web-services using C# and .NET 4.8 for demo environments, resulting in 11 new client acquisitions.
- Streamlined call center metrics by embedding live Power BI reports in Angular frontend, providing customers real-time insights on wait times and peak hours from an Azure SQL database.

Education

University of Guelph Sept. 2018 – May 2022
Bachelor of Engineering in Biomedical Engineering *Guelph, ON*

- **Relevant Courses:** C Programming, Numerical Methods, Signal Processing, and Electronic Devices