Raymond M. Tsang
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Software Engineer

Professional Summary

Experienced Software Engineer with over 20 years of expertise in full-stack development, cloud services, and data engineering. Skilled in delivering scalable, robust, high-performance software solutions, including web applications, microservices, and automation. Proven ability to optimize processes, improve performance, and streamline workflows through innovative development and automation. Strong advocate of SOLID principles, design patterns, and best practices to ensure maintainable and robust systems.

Key Achievements:
- Developed high-performing MVC web applications using C#, ASP.NET, SQL Server, and Entity Framework, improving data processing by 30%.
- Implemented microservices with Docker, reducing deployment time by 50%.
- Automated data extraction processes using Python and BeautifulSoup, saving over 100 hours per week.
- Proficient in CI/CD pipeline management, ensuring efficient and reliable deployments.
- Experienced in cloud-based hosting, debugging, and scaling applications.

Technical Skills

- **Programming Languages:** C/C++, C# , Python, Java, React.js, Golang, HTML, Bootstrap, XML, LINQ/PLINQ, T-SQL.
- **Frameworks and Libraries:** ASP.NET CORE, Entity Framework, Node.js, ML.NET
- **Cloud and DevOps Tools**: Microsoft Azure Cloud, Git/GitHub, Docker, Orchestrator, Jenkins, Dockerfile configurations, GitHub Actions, Microsoft VSTS, TFS
- **Databases:** SQL Server 2019, MySQL, LevelDB
- **Web Services:** RESTful Services, WCF, GraphQL
- **Automations:** Nunit, BeautifulSoup
- **Software Designs and Developments:** Modelio, Design Patterns, SOLID Principles, SDLC, Microservices, Data Structures and Algorithms Design

GitHub Projects

- [ParallelComputing](#): Developed PLINQ-based solutions for efficient multi-threading in C#.
- [DesignPatterns](#): Comprehensive library showcasing key design patterns in C#.
- [AlgorithmMastery](#): Optimized solutions for common algorithms and data structures.
- [KotlinTutorial](#): Developed applications to demonstrate Kotlin's features and interoperability.

Professional Experiences

Software Development engineer
Self Employment – Seattle, WA – December 2018 to August 2023
Engaged in full-stack software development for an analytic web application.
- Developed a full-stack analytic web application, improving data processing speed by 30%.
- Utilized SQL Server 2019, Entity Framework Core, and C# for database-first MVC development.
- Implemented microservices with Docker, reducing deployment time by 50%.
- Automated web scraping with BeautifulSoup, saving 100+ hours weekly.
- Managed CI/CD pipelines with GitHub Actions, ensuring seamless deployments.

Software Development Engineer
VMC Consulting – Redmond, WA December 2014 – June 2016
The Microsoft Windows device team offers validation services for hardware on Windows releases.
- Developed and maintained an MVC web application with n-tier architecture using C#, WCF, AWS, Entity Framework, and SQL Server.
- Designed and developed robust WCF web services tailored to the web application's needs.

- Integrated and managed Amazon Web Services (AWS) for hosting and administering the web application and web service.
- Debugged and resolved issues locally and remotely to ensure a smooth user experience.

Software Development Engineer in Test

BeyondSoft Consulting – Redmond, WA October 2011 – December 2014

The Microsoft SharePoint Online Dedicated Service offers SharePoint hosting tailored for enterprise-scale customers.
- Analyzed business, functional, and design specifications for SharePoint projects.
- Developed and conducted unit testing for WCF services, C# modules, SQL scripts, stored procedures, and SharePoint solutions.
- Created test automation frameworks for performance and load testing, as well as usage reporting.
- Managed farm servers, including features, web applications, site collections, and service applications.
- Configured SharePoint security settings, including role claims, certificates, and firewall configurations.

SharePoint Development Engineer

Terabonne LLC – Seattle, WA – March 2011 – September 2011

Terabonne LLC is a radio frequency engineering firm, the company specializes in configure and build radio antennas for AT & T.
- Automated Excel macro workflows in SharePoint, reducing engineering time by 90%.
- Designed SharePoint architecture solutions for document management and collaboration.

Lead Software Development Engineer in Test (Microsoft on site)

Volt Information Science – Bellevue, WA – April 2008 to April 2009

Search Engine Optimization (SEO) is an integral component of MSN.COM, focusing on developing tools to enhance the website's ranking on search engine result pages.
- Led test teams for SEO tools on MSN.com, focused on delivering high-quality MVC releases.
- Developed automated tests with C#, ASP.NET, and SQL Server 2008.

Software Development Engineer in Test (Microsoft on site)

Volt Information Science – Bellevue, WA – January 2005 to Dec 2007

ROQ Scan is an internal Microsoft tool designed for scanning potential viruses and Java codes within their software products. Developed using Agile/Scrum methodology and SDLC practices, the application follows a Service-Oriented Architecture (SOA) approach.
- Designed and executed test cases for ROQ Scan, a tool for virus scanning in Microsoft software.
- Created stored procedures using XQuery and XPath for database testing.

Education:
- Bachelor of Science in Electrical Engineering, University of Washington, Seattle, WA -- June 1993
- Certifications: Microsoft SQL Server 2000 (MCP)

Other:
- English
- Chinese (Proficient in read, write and speak)