

Justin Cheung

SOFTWARE ENGINEER

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Technical Skills

Programming	C/C++, C#, PowerShell, Java, Python, Bash, Swift
Platforms	Windows, Linux, iOS
Development Tools	Git, WinDbg, VS Code, Visual Studio, Xcode
Web	CSS, HTML, JavaScript, Vue.js

Experience

Microsoft Corporation

Redmond, WA, USA

SOFTWARE ENGINEER II - WINDOWS STORAGE SPACES DEV TEAM

Sep. 2015 - Present

- **Granular Repair:** Optimized in-place virtual disk repair (resilvering) on Storage Spaces Direct (S2D) clusters by implementing driver and metadata support for tracking stale data copies at stripe granularity (e.g., 256 KiB) vs. extent granularity (e.g., 1 GiB), which led to an order of magnitude reduction in runtimes (e.g., from hours to minutes).
- **Nested Resiliency:** Implemented driver support for deploying and managing virtual disks with node-mirrored mirror and node-mirrored parity resiliency configurations to enable virtual disks to tolerate 1 node + 1 drive failures on 2-node Storage Spaces Direct (S2D) clusters.
- **Diskstream:** Implemented a .NET Standard dynamic-link library DLL in C# to enable the HoloLens 2 emulator to modify the virtual machine disk image in user mode without requiring the disk image to be mounted on the host operating system.

Education

University of Waterloo

Waterloo, Ontario, Canada

BACHELOR OF APPLIED SCIENCE IN COMPUTER ENGINEERING

Sep. 2010 - Apr. 2015