

Brian Gianforcaro

PRINCIPAL SOFTWARE ENGINEER

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Experience

Azure Data - Microsoft Corporation

Redmond, WA

PRINCIPAL SOFTWARE ENGINEER

Mar 2013 - Present

- Technical lead and Manager of the team building a User Mode version of the Windows NT Kernel, for use within Microsoft.
- Maintainer of one of the secure process isolation technologies used within Azure, working across kernel and user mode.
- Managed emergency software migration due to the [Spectre / Meltdown](#) vulnerabilities, for several internal Microsoft teams pre-disclosure.
- Maintainer of SQL Servers's user mode scheduler, memory management, and synchronization primitives.
- Founding member of the [SQL Server on Linux](#) team, abstracting OS synchronization, I/O, and memory management from SQL Server.
- Founding member of the [Stretch Database](#) incubation in the SQL Server, later shipped as a primary feature of SQL Server 2016.

SQL Server Engine - Microsoft Corporation

Redmond, WA

SOFTWARE ENGINEER IN TEST

Jun 2011 - Mar 2013

- Responsible for developing test lab automation, test execution framework, and libraries.
- Member of the SQL Test Architecture Group, helping SQL engineers write solid maintainable test cases & automation.
- Shipped multiple features in SQL Server 2012 & SQL Azure, as well as a major re-design of the physical storage layer of SQL Azure.
- Member of a eight engineer team, who bootstrapped a re-architecture of SQL Azure Service, working on test infrastructure as well as the product.
- Researched, designed, and implemented tests which verified upgrade semantics of our distributed system.

Weather Sensing Group - MIT Lincoln Lab

Boston, MA

Co-OP

Mar 2009 - Sept 2009, May 2010 - 2011

- Developed software for the FAA funded [CoSPA](#) aviation weather prediction project.
- Designed and developed a real time process to mask weather images to any specified polygon shape.
- Designed and developed a real time process to sync late forecasts forward in time.
- Optimized and adapted existing algorithms to operate on larger datasets with faster run times, utilizing novel techniques.
- Extended data ingest server to read serial data from a remote satellite.
- Extended the GUI subsystem to display two new feeds, including the satellite data stream.

Lotus Software Division - IBM

Rochester, NY

PRE-PROFESSIONAL SOFTWARE ENGINEER

Sept 2008 - Mar 2009

- Led a team to design and develop a Twitter plugin for Lotus Notes.
- Prototyped a Mac OS X based connector for the Lotus product Quickr (think corporate Dropbox), using FUSE file system technology.
- Worked with the Toronto based IBM Lab on an installation and provisioning system for proprietary linux server software packages.

Cyber Infrastructure Technologies Integration - Clemson University

Clemson, SC

SYSTEMS DEVELOPER

Jun 2008 - Sept 2008

- Developed infrastructure to enable virtual machines to run on the Palmetto Cluster, providing checkpointing to unenlighted workloads.
- Created a visualization for the Palmetto Cluster's scheduling algorithm, leveraging the experimental HTML5 canvas element for all 2D graphics.

Open Source Projects

SerenityOS Contributor and Co-Maintainer of the [Serenity Operating System](#), working across kernel and user space.

MSR Detours Maintainer of the [Microsoft Research Detours](#) software package for instrumenting API calls on Windows.

Presentations

Berlin **All Systems Go! 2019**, [How Microsoft SQL Server Went Multi-Platform: SQLPAL](#)

September, 2019

Patents

Pending: **Zwilling, Michael, et al. - Database Data Distribution Management**, U.S. Patent Application 20160125015 *Filed May 5, 2016*

Skills

Programming C, C++, C#, Python, Java, Elixir, Rust, JavaScript, LaTeX, Etc...

Mentoring Mentoring of interns, new hires, and fellow engineers.

Hiring Active in recruiting and hiring for the Azure Data Organization.

Leadership Experience managing teams as both a technical lead, and people manager.

Education

RIT - Rochester Institute of Technology

Rochester, NY

B.S. IN COMPUTER SCIENCE - MINOR IN ENVIRONMENTAL STUDIES

2006 - 2011