

Grzegorz (Greg) Lapinski

PRINCIPAL SOFTWARE DEVELOPER · DEBUGGING EXPERT

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Education

Gdansk University of Technology

Gdansk, Poland

B.S. IN COMPUTER SCIENCE AND ENGINEERING

1998 - 2003

- M.S. and B.S. in Computer Science
Minor: Biomedical Engineering
Master's thesis: "EEG analysis using wavelets transform"

Experience

Salesforce

Bellevue WA, USA

PRINCIPAL BACKEND SOFTWARE ENGINEER

Aug. 2021

- Worked on AsyncAPI performance and stability improvements.
The processing latency was reduced four times, customer throughput increased by 35%, SQLServer resource utilization decreased 75%, and the number of incidents caused by noisy neighbors decreased by 99.
Designed and implemented an automated throttling algorithm using probabilistic programming and surrogate models to guarantee fair resource sharing. The solution dynamically manages concurrent workloads by automatically throttling processing without manual intervention.
- Designed and implemented a new feature in Automation Studio (Marketing Cloud application).
- Investigated production performance and availability issues (various Marketing Cloud services).
- Mentored team members in managed code debugging and SQLServer optimizations.
- Technologies:
C#, SQLServer, WinDbg.

Microsoft Corporation - SQL Server

Redmond WA, USA

PRINCIPAL SOFTWARE ENGINEER

Oct. 2013 - Aug. 2021

- Worked on various aspects of the SQL Server engine, in the servicing and the core teams. Improved and implemented bug fixes in many areas of SQL Server engine, support tools, and client drivers.
- Worked on the integration of MLOS with SQLServer to enable database engine performance optimization:
<http://github.com/microsoft/mlos>
- Co-authored a DEEM 2020 paper:
<https://arxiv.org/pdf/2006.02155.pdf>
- Implemented new, C# based debugging tools for SQLServer engine leveraging code generation based on the pdb files.
- SqlCLR Host maintainer.
<https://docs.microsoft.com/en-us/dotnet/framework/data/adonet/sql/introduction-to-sql-server-clr-integration>
- Implemented SQLServer big data cluster data pools.
<https://docs.microsoft.com/en-us/sql/big-data-cluster/concept-data-pool>
- Enabled debugging of .NET applications (via MSVSMON) for user-mode implementation of NT kernel.
<https://cloudblogs.microsoft.com/sqlserver/2016/12/16/sql-server-on-linux-how-introduction>
- Technical lead on the Extensibility team. Ported SQL Satellite to Linux OS.
<https://docs.microsoft.com/en-us/sql/advanced-analytics/concepts/extensibility-framework>
- Implemented native spatial feature and other performance improvements:
<https://blogs.msdn.microsoft.com/bobsq/2016/06/03/sql-2016-it-just-runs-faster-spatial-index-builds-faster>
<https://blogs.msdn.microsoft.com/bobsq/2016/06/03/sql-2016-it-just-runs-faster-tvps-with-spatial-columns>
<https://blogs.msdn.microsoft.com/psssql/2016/03/03/sql-2016-it-just-runs-faster-native-spatial-implementations>
- Improved performance of managed XEvent Linq readers:
<https://blogs.msdn.microsoft.com/psssql/2016/05/18/sql-2016-it-just-runs-faster-xevent-linq-reader/>
- Part of SSMS QDS UI team:
<https://docs.microsoft.com/en-us/sql/relational-databases/performance/monitoring-performance-by-using-the-query-store>
- Implemented SSMS compare plans feature and new plan layout algorithm:
<https://www.sqlshack.com/how-to-compare-query-execution-plans-in-sql-server-2016>
<https://www.dotnine.net/ssms-preview-plan-comparison-tool-and-plan-viewer-optimizations>
- Technologies:
C++, C#, NetFX, NetCore, gRPC, WinDbg, WPF.

Microsoft Corporation - Azure Networking

Redmond WA, USA

SOFTWARE ENGINEER IN TEST

May. 2012 - Oct. 2013

- Designed and implemented deployment service for PaaS and IaaS tenants. Created new test framework - Remote Cluster Repository.
- Designed and implemented code coverage collection for SLB (Software Load Balancer).
- Owned SLB functional tests for the following features: Cross Cluster support and Route Aggregation.
- Technologies:
C#, Azure, Magellan (code coverage tool), Detour, WCF, Remote Linq.

Microsoft Corporation - Azure Networking

Dublin, Ireland

SOFTWARE ENGINEER IN TEST

May. 2009 - May. 2012

- Designed and implemented test architecture for Azure DNS service. Responsible for all aspects of service testing. Developed innovative test framework RCES – remote code execution and code injection framework – to simplify distributed testing and enable fault testing in a heterogeneous environment.
- Technologies:
C#, IL, Azure, WCF, WinDbg (Windows Debugging Tools).

Microsoft Corporation - Windows Phone 7

Dublin, Ireland

SOFTWARE ENGINEER

May. 2008 - May. 2009

- Worked on the software application designed to monitor network usage and help users manage their data plans, including driver-level components, web services, and UI. Responsible for the architecture, design, and implementation of the system to capture and filter network data traffic and for the cost estimation engine.
- Technologies:
C++, Windows Mobile 6, Windows Mobile 7, Visual Studio 2008, Platform Builder, NDIS Lightweight Filter (LWF) driver, MS SQL Server 2008.

EMCC Software Ltd

Manchester, UK

SOFTWARE ENGINEER

June. 2007 - May. 2008

- Worked on BlackBerry push email client for Sony Ericsson mobile phones.
- Technologies:
C++, Code Warrior, Symbian SDK v 9, UIQ 3.s

Ideal Host Poland

Gdansk, Poland

SOFTWARE ENGINEER

Jul. 2005 - May. 2007

- Acted as application architect and lead developer for the line of business system designed and developed for the multimillion-pound UK Joint Industry Board for Plumbers. Responsible for all aspects of the organization, including the UK government CSCS scheme and NVQ distribution.
- Technologies:
C#, .NET 2.0, Windows Forms, MS SQL Server 2005, MS SQL Server 2005 Reporting Services, Crystal Reports.

Axiom Software

Gdansk, Poland

CO-FOUNDER

Jan. 2004 - Jul. 2005

- Designed and developed a system to improve the management of sales representatives' work. The system allows instant invoice and order creation, design and completion of marketing questionnaires, schedule management, task management, accounting for distances traveled, and sales report generation. Successfully deployed product to several food distribution companies with full integration with existing company management system.
Responsible for complete product cycle, including sales and marketing.
- Developed an application on Pocket PC platform to track and record GPS position. This application loaded maps with ArcView format and displayed details of the current user position.
- Technologies:
Microsoft Visual C++ 6.0, MS Embedded Visual C++, .NET Framework 1.1, .NET Remoting, gSoap (C++ web services framework), MS Embedded Visual C++, MS SQL Server 2000, SQL Server CE 2.0, SQL Server Merge Replication.

IVO Software (now Amazon Text to Speech)

Gdansk, Poland

SOFTWARE DEVELOPER

Aug. 2001 - Dec. 2003

- Ported the voice synthesizer (Polish language) to Symbian platform S60, implemented audio streaming.
- Implemented SAPI 4.0 Speech Server, an interface for speech synthesizer used as integration with screen reader application.
- Designed and implemented UniSpeaker, an application designed for visually impaired people. The application reads the clipboard, the keyboard strokes, and new messages on your email account.
- Improved the reliability of the Speech Synthesizer security protection.
- Technologies:
Microsoft Visual C++ 6.0, Symbian SDK, ActiveX - ATL, COM, Win API, x86 Assembler.