ETHAN MOFFAT

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TECH SKILLS

Languages: C#, C++, Java, Go, Python, PowerShell, Bash, YAML
Tools: git, CMake, Azure, Docker, Kubernetes, OpenAPI 3.0

EXPERIENCE

SENIOR SOFTWARE ENGINEER – DELL TECHNOLOGIES – APEX CLOUD

JULY 2021 – PRESENT
JAVA, SPRING BOOT, GO, REACT, NODE, TYPESCRIPT, REST, KUBERNETES

Early-Stage Development (ESD) team:

- Created process for exposing internal APIs through developer portal / API gateway. Allowed external partner teams at Microsoft to access internal APEX cloud APIs.
- Designed and implemented compliance microservice for new baremetal-as-a-service cloud offering. Core service of critical APEX offering used by all other baremetal service teams for compliance information.
- Investigated compatibility of Dell APEX cloud PKS environment with Dell CSI drivers for Powerstore product lines. Allowed for onboarding of storage systems to APEX cloud.
- Investigated integrations between Cloudify (IaC software) and Temporal (workflow management software). Allowed for onboarding of both these technologies to APEX cloud.

SOFTWARE ENGINEER II - MICROSOFT – SQL ENTERPRISE

NOVEMBER 2017 – JUNE 2021
C#, GO, C++, PYTHON, BASH, POWERSHELL, LINUX, REST, DOCKER, NOTEBOOKS

SQL Server - Azure Arc team:

- Designed and implemented backend service (Azure Function) for processing generic data. Implemented system for ingestion of on-prem SQL Server metadata. Allowed for link of on-prem SQL Server instances to Azure cloud, enabling the primary feature of the SQL Server - Azure Arc offer.

SQL Server on Linux team:

- Developed testing infrastructure for SQL Server on Linux Replication. Certified compatibility and operability of replication feature on Linux, allowing for easy automation of legacy test definitions that previously only ran in a Windows environment.
- Implemented 'adutil' CLI tool for easily configuring Active Directory authentication for SQL Server on Linux. Condensed a tedious manual process of configuring AD auth for SQL Server on Linux into a few simple commands using adutil. With support of notebooks, made AD auth possible for SQL Server containers.

Microsoft R Release and Infrastructure team:

- Maintain and fix bugs for custom python/conda installer written in C#. Use telemetry data to pinpoint issues and develop fixes. Work with customers on broken installs.
- Maintain legacy custom build system 'ShipR' responsible for building all Microsoft R products and dependencies; using Azure APIs to create VMs, provision them, add them to a pool, schedule builds from PRs, and tear them down once builds completed.
- Implemented bug fixes and improvements for ShipR to reduce Azure spend (internal subscription) by significant factors by automating cleanup of orphaned resources.
- Took over as primary developer after departure of team's last principal dev. Drove migration from Jenkins-based system to Azure Devops Pipelines.

On-call:

- DRI (designated responsible individual) in rotation for custom 'ShipR' build system.
- DRI in rotation for Azure SQL DB authentication, gateway, and security queues.

SOFTWARE ENGINEER - MICRO ENCODER INC (MEI)
JULY 2015 – NOVEMBER 2017 (C#, C++, WPF, POWERSHELL, NUNIT)

MiCAT Planner team:

- Develop features for full-stack desktop application using WPF, C#, and SQL Server. Software included 3D view and supported import of multiple CAD formats.
- Implemented "Intersection Circle" feature, calculating the intersection of cones, cylinders, etc. with a plane. Allowed for GD&T (geometric dimensioning and tolerancing) callouts to be applied to said intersection circle, a high priority feature for customers.
- Implemented 3D model transparency, allowing for easy viewing of model and tolerances at any angle. Added WPF controls to control transparency. Resolved performance issues with rendering by doing a deep dive investigation into rendering subsystems.
- Developed "Controller Integration Tests", which allowed for improved testing at the layer directly under the UI by executing a workflow and checking expectations of the domain model. Used NUnit's custom domain language extensions to write tests in "fluent" style using concepts specific to the MiCAT domain.
- Worked on experimental team using Hololens and Unity to develop a sales demo application for showing measurement equipment in Augmented Reality. Demoed experimental solution to executives from parent company.
- Work on "technical user stories" to improve/refactor older architecture to "Onion" architecture.
- Improve test coverage. All contributions to product code included meaningful unit tests with high coverage.
- Collaborated with product owners to refine requirements and acceptance criteria for new features.
- Served as a Scrum Master for one of eight globally distributed Scrum teams.

SOFTWARE ENGINEER - APPLIED VOICE AND SPEECH TECH. (AVST)
JULY 2014 – MAY 2015 (C++, C#, MFC, MYSQL, SOAP)

Implemented feature at all layers of technical stack to add new voicemail setting capability. Updated custom MFC UI code, backend Windows services, protocol, and MySQL database schema.

Refactored legacy telephone menu handling code to object-oriented C++11 code. Improved code flow and maintainability.

Fix various cross-component bugs using multi-process debugging skills.

DEVELOPER/ANALYST - SEATTLE PACIFIC UNIVERSITY (SPU)
FEBRUARY 2014 – JULY 2014 (ORACLE PL/SQL, HTML, CSS, C#, PERL)

Developed process for making pages printer-friendly on SPU's student/faculty/staff online portal. Improved readability of printed pages for online portal reports.

Implemented automatic form-filling when accessing link to external data collection service from online portal. Eased data collection for users so known fields did not need to be re-entered.

Created system for automatically querying SPU's student/faculty/staff database and populating student photos in third-party security system. Allowed for security team to verify student identity when using ID to access buildings.

Updated written documentation on internal departmental practices.

SR. PC SUPPORT TECHNICIAN - SPU
MAY 2011 – FEBRUARY 2014

Delivered professional and timely customer service to top-ranking (Vice Presidents) SPU leadership.

Provided technical support to students and staff via phone, email, and in-person walk ups to service desk.

Provided timely emergency troubleshooting to faculty and staff in classrooms, offices, and during on-campus events.

Supported students as contracted technician for advanced problems beyond the ability of the student helpdesk.

SOFTWARE ENGINEER INTERN - AVST
SUMMER 2012; SUMMER 2013

Developed an application allowing service technicians to migrate raw voicemail recordings and metadata to AVST's voicemail system. Allowed sales to provide easy migration of data from competitor systems.

Began project upgrading IPv4-only software to use dual-mode IPv4/IPv6 sockets.

Enhanced the software licensing utilities for AVST's software.

SOFT SKILLS

- Leadership: serving as a Scrum Master. I facilitated work tracking and reporting at Micro Encoder and my teams at Microsoft.
- Mentoring: currently mentoring one junior developer; mentored 4 junior developers at Microsoft. I have been mentored by managers and more senior developers across all positions.
- Communication: exemplary skills through listening well and responding thoughtfully. My communication skills have been praised by managers at SPU, MEI, Microsoft, and Dell.
- Teamwork: collaborating across disciplines, driving for results. At MEI I worked with product owners and developers across time zones, handing off work to ensure bugs were fixed ahead of deadlines.