

Dmitriy Shepelev

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AI tooling engineer building agentic developer workflows, MCP servers, code-intelligence pipelines, & large-scale build infrastructure at Microsoft.

WORK EXPERIENCE

Software Engineer II – Microsoft Corporation, CoreAI Team | September 2024 – Present | Remote

- Built semantic code-indexing pipelines for Engineering Copilot, converting multi-million-line, 10+ language monorepos into Microsoft Research’s AST & code-graph artifacts for LLM code intelligence
- Shipped an AI release-validation advisor that uses LLM agents & MCP tools to investigate build failures across CloudBuild, which serves 1k+ repositories & ~77k builds/day
- Developed & extended CloudBuild MCP servers exposing build logs, engineering chat, wiki/docs, & diagnostics for coding agents
- Enabled shared compilation for CodeQL build analysis & rolled it out as the default for 1k+ CloudBuild repositories, reducing analysis build time by up to 50%
- Fixed a CloudBuild scheduler defect affecting 1k+ daily cloned builds, restoring performance-based worker selection & eliminating hundreds of wasted builder-hours per day
- Created CloudBuild Visual Studio installer supporting 1k+ repositories, enabling access to newer Visual Studio toolchains while reducing per-machine default installation size from 30 GB to 3 GB

Software Engineer – Microsoft Corporation | August 2022 – September 2024 | Remote

- Expanded shared compilation across 1k+ CloudBuild repositories, reducing build time by up to 60%
- Integrated distributed C++ build acceleration into CloudBuild, reducing repository build time by up to 57%
- Halved MSBuildCache build time by implementing file-access reporting in MSBuild, enabling shared compilation via BuildXL file-access prediction
- Improved CloudBuild support for parallel multitargeted builds, reducing build time by up to 25%
- Reduced CloudBuild machine idling by 35% through scheduler efficiency improvements
- Reduced build times by globally reusing input-copy hashes, with over 1 million hashes reused in some repositories
- Developed plugins onboarding 1/3 of legacy build system repositories to build correctness & performance features

Software Development Engineer Intern – Amazon Web Services | June 2021 – September 2021 | Seattle, WA

- Built a generic Java HTTP handler for AWS IoT service APIs, reducing future integration work by 2+ engineer-months per API

Undergraduate Research Assistant – University of Washington PLSE Group | June 2020 – September 2020 | Seattle, WA

- Fixed Java type-checking bugs in the Checker Framework & analyzed signedness errors across GitHub repositories

TECHNICAL SKILLS

- AI/Agents: Azure OpenAI, MCP, RAG, tool calling, coding agents, agentic workflows, LLM application development
- Cloud/Infra: Azure, Azure DevOps, CI/CD, distributed systems, build systems
- Languages/Tools: C#, .NET, Java, Git, Bash, Kusto, SQL, MongoDB, JavaScript, Node.js

PROJECT

- Diabetes Copilot: built an Azure OpenAI/MCP decision-support app that analyzes CGM, insulin pump, meal, & activity data from MongoDB-backed health records

EDUCATION

University of Washington — Seattle, WA | B.S. Computer Science, *cum laude* | GPA: 3.90 | June 2022