Skylar (Sulim) Nam

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SUMMARY

Senior Software Engineer with 8+ years at Microsoft leading Visual Studio Installer architecture, modernization, reliability, and performance. Expertise in C#/.NET, distributed workflows, Kusto/KQL, Azure DevOps, and AI-assisted engineering automation; pursuing an MSE in Artificial Intelligence at the University of Pennsylvania.

EXPERIENCE

Microsoft Corporation | Redmond, WA | *Senior Software Engineer (Visual Studio)* July 2019 – Present

- Own the **architecture and evolution of the Visual Studio Installer**, a graph-based platform for IDE installs, updates, migrations, and extensions, with end-to-end ownership of distributed workflow orchestration, telemetry, reliability, and performance.
- Designed and developed the dependency-aware foundation for **parallel package installation** using Kahn's topological sort to preserve dependency order while parallelizing independent installs; benchmarked up to **70% faster package installation** and **30% end-to-end improvement**, saving customers up to **3M hours annually**, with rollout guarded by feature flags, telemetry, and staged validation.
- Led multiple features such as the delivery of **Visual Studio Rollback**, extension support, soft-reboot behavior, installer experience improvements, and install/download optimizations; reduced hard-reboot rate from **29.7% to 7.71%**, supported **1.5K weekly Rollback sessions**, and sustained **99%+ extension download success** across **1.5M+ sessions annually**.
- Lead Visual Studio Setup reliability through **Kusto/KQL, telemetry analysis, crash and failure diagnostics, and AI-assisted automation using Copilot CLI and MCP-backed workflows**; converted multi-hour triage into automated reports, steadily sustain **97%+ install success** and **98–99%+ update success rate**.
- Led the multi-year **WiX 3 to WiX 6 modernization** across multiple repositories, partner teams, and legacy build systems; redesigned decade-old MSI infrastructure spanning approximately **1K projects**, pruned **352 unused projects**, converted **286+ projects**, and codified migration guidance into a reusable **Copilot Agent Skill** to reduce future partner-team migration effort.
- Shipped the Visual Studio 2026 **migration experience** across release channels, settings, and extensions, including the installer's first per-user extension discovery capability; supported **4M+ migration sessions across 232 countries/regions**.
- Scaled team impact through architecture reviews, telemetry guidance, PR reviews, AI-assisted engineering standards, WiX migration training, technical demos, mentoring, inclusive hiring, and women-in-engineering community work reaching approximately **500 employees**.
- Built **Setup Hotseat Agent**, a multi-persona AI agent with orchestration to streamline high-volume questions and feedback for the Setup team serving as the first point of contact for users installing Visual Studio, reducing manual triage and response effort.

Microsoft Corporation | Redmond, WA | *Software Engineer (Azure Intelligence Platform)* July 2018 – July 2019

- Built a **C# ETL/schema-mapping automation tool** for GTM/Modern data workflows, enabling partner teams to generate **Kusto ingestion mappings** for blob-backed datasets, reducing onboarding time by **30 minutes to 2 hours per process**, and improving repeatability through demos and documentation.

Prattle Analytics | St. Louis, MO | *Quantitative Analyst Intern* July 2017 – Aug. 2017

- Improved NLP-based bank representative speaker detection for sentiment analytics covering central banks and public companies, increasing accuracy from **50% to nearly 100%**; contributed to scoring-model research using CAPIQ APIs and machine learning classifiers.

SKILLS

Languages : C#/.NET, Python, SQL, C++, Java, XAML, Scala, Rust

Engineering & Technologies : Software architecture, system design, distributed workflows, dependency graphs, reliability engineering, performance optimization, WPF, Kusto/KQL, Azure DevOps, Git, CI/CD, telemetry/observability, MCP servers, LLM APIs, React Native, Vercel, Redis, PostgreSQL

PROJECTS

Vanny – AI Cosmetic Scanner & Virtual Vanity App (https://devpost.com/software/vanny) June 2026

- Built and deployed an **Expo React Native skincare app** integrating Gemini OCR, camera and image preprocessing, Vercel API proxying, persistent virtual vanity storage, product conflict detection, and AI-generated routine recommendations.

Persona Lab – LLM-Powered Social Quiz/Test App (https://kpersonalab.com) Fall 2025 – Present

- Built and deployed an **LLM-powered social quiz platform** with Redis caching and storage, CI/CD, and Vercel deployment for quiz creation and sharing.

EDUCATION

University of Pennsylvania | Philadelphia, PA (GPA: 4.0) Aug. 2024 – Present
Master of Science in Engineering in Artificial Intelligence (MSE-AI)

Washington University in St. Louis | St. Louis, MO Aug. 2014 – May 2018
Double Major in Computer Science and Economics & Strategy