

# ELIZABETH CASTILLO

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## EXPERIENCE

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### Software Engineer | Microsoft (Secrets & PKI)

Redmond, WA | February 2024 – Present

- **Built and maintained big data platform tables** across 30+ clusters per region worldwide, ingesting data from multiple Microsoft sources, transforming via Azure Synapse, and post-processing to generate production-ready schemas
- **Led schema migration for certificates-in-use table** from V1 to V2 across isolated government air-gapped and China sovereign cloud regions with <24h cutover, delivering improved schema based on customer feedback with zero data loss and zero production incidents
- **Scaled pipeline capacity 4x** by migrating certificate auto-activation lag calculation (time delay between certificate issuance and activation) from Kusto queries to Spark code, reducing compute load on shared Kusto clusters while maintaining 30-min SLA and processing millions of daily certificate activation events
- **Built automated validation framework** using Kusto queries for data consistency checks and rollback scripts, covering 100% of critical tables to guarantee data integrity post-deployment
- **Created diagnostic tooling** adopted by 5+ teams: 17 production Kusto queries for cert expiration, rotation failures, and service dependencies
- **DRI for 10+ production pipelines** across commercial and national clouds; owned 24/7 on-call rotation handling Sev-2 alerts and prevented multiple live-site outages through proactive certificate monitoring
- **Decreased incident resolution time 30-40%** via reusable queries against team-generated tables, enabling observability and alerts for suspicious certificate/secret behavior across Microsoft teams
- **Mentored 3+ junior engineers and interns** on operational best practices and team onboarding

### Software Engineering Intern | Microsoft (Secrets & PKI)

Redmond, WA | June 2023 – September 2023

- **Automated testing for [Azure Key Vault for Linux VM extension](#)** across 20+ VM images using ARM templates and the LISA framework, ensuring production readiness
- **Contributed to the open-source [LISA framework](#)** and integrated automated validation into CI/CD pipelines, eliminating manual test cycles and accelerating release velocity ([view contributions as t-ecastillo](#))
- **Improved developer experience:** Updated official Azure Key Vault Linux extension documentation
- Applied Python, JSON, and Flake8 standards for code quality and consistency

## EDUCATION

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### University of Washington Bothell | B.S. Computer Science & Software Engineering

2021 – 2023 | GPA: 3.7 | Dean's List for two consecutive quarters (Fall 2022, Winter 2023)

### Bellevue College

2020 – 2021 | GPA: 3.89

## HONORS & LEADERSHIP

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Grace Hopper Conference Scholar (AnitaB.org) • Google ALPFA Conference Scholarship • The New Technologist Mentor (Microsoft, 2024) • President, Computing Careers Club (UW Bothell)