

# Sisir Kadiveti

(419) 377-2666 | sisirkadiveti@gmail.com | Renton, WA | linkedin.com/in/sisir-kadiveti

## TECHNICAL SKILLS

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**Programming Languages:** C++, C#, Python, Java, JavaScript, TypeScript, Kotlin, SQL, PowerShell, HLSL/GLSL  
**Game Engines & Tools:** Unreal Engine, Unity, Blueprint, Behavior Trees, NavMesh, World Partition, EQS  
**3D Art & Design:** Blender, Photoshop, Substance Painter, Audacity, After Effects, Premiere Pro  
**Development Tools:** Git, Perforce, Rider, Docker, Azure, AWS, Linux/Unix, Android SDK, REST APIs, JSON

## EXPERIENCE

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### Galactic Gateway LLC

Apr 2023 – Present

#### *Indie Developer*

- Engineered a procedural world generation system in Unreal Engine (C++) for a cross-platform (Android, iOS, PC) 3D runner using layered Perlin Noise, spatial partitioning, seed control, and terrain masks for biome diversity.
- Implemented asynchronous chunk streaming with greedy meshing, mesh LOD, and multithreaded job queues to minimize frame hitches, reduce draw calls, and optimize rendering in large open spaces.
- Developed a modular AI architecture combining behavior trees, FSMs, and custom A\* pathfinding with parameterized heuristics to enable terrain-aware, decision-driven enemies that react intelligently to player behavior.
- Built core systems for melee and ranged combat, procedurally spawned traps, collectibles, and stat modifiers, with Blueprint-integrated gameplay logic and profiling for memory, performance, and tick efficiency.

### Microsoft

Aug 2023 – Feb 2025

#### *Software Design Engineer I*

- Developed cross-platform performance profiling tools in C# and PowerShell to capture and analyze OS-level behavior, memory usage, and CPU metrics across Windows and Linux systems.
- Built internal web-based diagnostic utilities using .NET, React, and Flask to automate data workflows, support telemetry collection, and reduce manual testing overhead by 50%.
- Optimized SQL-based infrastructure by designing efficient queries, automating batch jobs, and improving internal tooling responsiveness and throughput for engineering teams.

### Amazon

May 2022 – Mar 2023

#### *Software Developer (SDE I)*

- Designed backend adapters in Kotlin and Python to integrate cloud APIs and voice-driven services, enabling seamless cross-region deployment and real-time feature updates.
- Built and maintained automated test pipelines using AWS tools to validate speech recognition logic, reducing false positives/negatives and improving NLP test accuracy by 20-30%.
- Streamlined test reporting by integrating multiple pipelines with TestRail via its API, improving test traceability and QA workflow efficiency across distributed teams.

## PROJECTS

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### Bubble Bobbler (Global Game Jam 2025 - Ongoing)

- Built a 3D platformer in Unreal Engine 5 with C++, using physics-based bubbles for traversal, and puzzle-solving.
- Engineered a custom Chaos Physics system for buoyancy, elastic collisions, and reactive environmental forces.
- Implemented AI with Behavior Trees, EQS, and NavMesh for responsive enemy movement and targeting.

### AI Navigation Engine (Microsoft Capstone with Mojang Studios)

- Developed a scalable C++ pathfinding engine using A\* and spatial partitioning for dynamic 3D navigation.
- Built a Unity-based visualization tool to simulate variable actor sizes and validate navigation paths.
- Authored detailed technical documentation and test suites to support performance benchmarking.

### Pokémon-Inspired Game (Unity, Android, SQL)

- Built a Unity-based turn-based battle prototype with stat-driven combat, enemy AI, and capture mechanics.
- Integrated PokéAPI data using JSON parsing and filters to enable dynamic team building across Android and web.
- Implemented persistent progression using SQLite for session continuity and team management.

## EDUCATION

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### University of Washington (Seattle, WA)

Sep 2017 – Dec 2021

*Bachelor of Science in Electrical and Computer Engineering*