

SKILLS

Backend/Systems

- Unity's Jobs + DOTS
- Multithreaded conversion
- C#, NodeJs, Sql
- Component and systems-oriented design

Tooling

- Unity editor extensions
- ShaderGraph, VFX Graph
- Designing custom editor authoring workflows
- Git and Perforce
- 3D modeling in Blender

Specific applications

- Procedural mesh generation
- Behavior tree NPC AI
- ScriptableObject config
- Real time simulations
- GPU acceleration

EDUCATION

BS Software Engineering

Milwaukee School of Engineering | 2017

EXPERIENCE

Seeb Defender fraculation.com/blog/seeb-defender-project/

12/26/2020 – Current

- Built a farming simulation, tower defense, roguelite around a dynamic plant simulation
- Managed a large project and reached target 60FPS with all systems
- Used scriptable objects to accelerate game design and configuration
- Designed realism-inspired genome simulation (github.com/dsmiller95/Genetics)
- Skills: Unity3D, C#, DOTS, 3D modeling, Performance Optimization

L-System language extension fraculation.com/blog/lindenmayer-implementation

12/26/2020 – Current

- Procedural mesh generation language highly optimized with multithreaded Jobs
- Extended the Unity editor to compile custom language files into mesh generators
- Skills: Unity3D, C#, Unity Jobs, Unity library management, Unit and Performance testing

Spideyboi fraculation.com/Spideyboi/

07/31/2020 – 08/03/2020

- A 2D puzzle game built in a weekend, in which the player programs a spider to build a web

Dimensional Rifter: github.com/dsmiller95/Dimensional-rifter

08/08/2020 – 12/25/2020

- Designed and built a 2D colony simulation framework reminiscent of dwarf fortress or rimworld
- Created a custom Behavior Tree system as the AI of colony members
- Skills: Unity2D, C#, DOTS, Unity's Jobs, 2D sprite design

AWS and Angular Application developer @ Milwaukee tool, Sympplr Cactus, API Healthcare

08/28/2017 – 06/18/2021

- Developed full-stack Angular web applications, in a small team and as part of up to 6 teams
- Designed near real-time data processing architecture to support fast searching in the cloud
- Skills: C#, Typescript, Python, Kinesis, AWS Lambda/ECS, SQL, dynamodb, terraform