

## Professional Experience

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### Senior Gameplay Engineer – That’s No Moon (June 2022 – July 2023)

#### *"TNM1"*

- Extended Unreal’s core spawning logic to support our bespoke “Modular Mesh” characters and work directly with the designer-authored mission start points and checkpoints.
- Created a system for physically simulating small projectiles traveling at velocities on the order of the speed of sound, with separate simulation models for atmosphere and material penetrations, along with an event-subscription model to simplify the results for downstream consumers.
- Worked with Animation Engineering & Design to implement “Aim Obstacle Avoidance” algorithms to support intelligent dynamic posing of the character models while maintaining our gameplay invariants.

### Gameplay Engineer – Epic Games (May 2021 – May 2022)

#### *Fortnite*

- Gameplay programmer for Season 18 “War Effort” community fundraising feature, using existing aggregation tech to allow players to vote between items, and automatically add the winner to loot pools.
- Gameplay support for bringing back the “B.R.U.T.E. Mech,” a vehicle created for season 10 that could be funded as part of the War Effort. The mech is unique, which created additional complexity.
- Modified core damage processing code to implement rechargeable overshield in support of Season 20’s “No Build Mode.”
- Gameplay support for “Siege Cannon,” including adapting old weapon code that allowed the player to be fired out of the barrel of the cannon and pitching & implementing squad-ping-targeting UI.

### Gameplay Engineer – Insomniac Games (August 2018 – May 2021)

#### *Marvel’s Spider-Man: Miles Morales*

- Gameplay programmer on “The Battle For Harlem” mission, including the final boss fight with The Tinkerer and the post-fight specialized gameplay sequence. Worked closely with design and VFX to achieve our narrative, gameplay, visual, and performance targets for the level. [\[Video\]](#)
- With support from VFX and accessibility teams, implemented several of the new accessibility options including button swapping, low-visibility modes, and chase assist options.
- Implemented many other fixes and one-off features, including the visor mods “Eyes in the Back of My Head,” “Optic Triangulation,” “Residual Venom,” and “Eyes on Target.”

#### *Marvel’s Spider-Man: The City that Never Sleeps*

- Gameplay programmer responsible for Silver Sable, supporting the lead combat designer on the enemy Silver Sable fight and the encounter designer for the allied Silver Sable AI a few missions later.
- Post-launch bugfixes and patch support for the main game & the City that Never Sleeps DLC.

### Game Engineer - Schell Games (August 2016 – August 2018)

#### *Star Wars: Jedi Challenges – Duel*

- Lead combat programmer working closely with the design and art teams to bring unique melee combat systems to a mobile AR platform [\[Video\]](#).
- Prototyped and implemented all core 1-on-1 AR lightsaber combat systems for blocking, attacking, and fight-specific attacks (such as blaster deflection) for 6 duels over the course of 8 months.
- Created a variety of Unity extensions for the team, including tools to allow designers to quickly turn animations into in-game attacks, workflow simplifiers like a favorites window and a rig optimization window, and scripts to automate common tasks like creating materials for use on low-end devices.

#### *Project "Monster"*

- Modified codebase of an iPad drawing game to create designer-facing tooling & an audio pipeline that allowed the team to increase the game content by 3x over the 10 weeks of the project.
- Created new systems to support data persisting across multiple play sessions, player choice and branching narratives, and art effects not present in the initial release of the game.

## Education

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**Bachelor of Science, Computer Science** – Western Washington University, Bellingham, WA – 2014