

Rabbi Mirza

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EDUCATION

University of Twente | BSc Technical Computer Science (Minor in Creative Technology) **Enschede, Netherlands** | 2024 – Present

- Relevant Coursework: Data Structures & Algorithms, Software Systems, Discrete Mathematics, Functional Programming (Haskell), Machine Learning & Logic.

TECHNICAL SKILLS

Programming Languages: Luau / Lua, C++, C#, Java, JavaScript, TypeScript, Python, C, Haskell

Game & Systems Engineering: Gameplay Architecture, Client-Server Replication, Procedural Generation, Pathfinding, State Machines, Object Pooling

Tools & Software: Roblox Studio, Blender (3D Modeling & Rigging), Git / GitHub, Visual Studio Code, Aseprite, Node.js

EXPERIENCE & KEY PROJECTS

Untitled Magic Game | Lead Engine & Systems Programmer **Roblox Studio, Blender, Aseprite** | 2026

- Continuation Passing Style Spell Engine:** Engineered an emergent spell composition system using higher order wrapper functions, allowing infinite modifier stacking and a nondestructive virtual UI tree preview for real time tactical HUDs.
- High Speed Binary Replication:** Replaced standard networking layers with a custom declarative serialization schema and dynamic byte width scaling, streaming bit aligned delta updates that reduced network payloads by over 70 percent.
- Custom Vector Steering AI:** Ripped out bloated physics constraints to build a pure mathematical vector engine, implementing custom flocking behaviors (separation and repulsion) and string-pulling algorithms for massive AI swarms.
- Performant Environmental Destruction:** Engineered a real time boolean destruction system leveraging chunked GeometryService subtraction, heavily optimizing map carving via spatial isolation and client-side physics caching.

OSOM (Out of Sight, Out of Mind) | Gameplay Programmer **Godot Engine** | 2026

- Modular Game Architecture:** Engineered a puzzle game architecture using the Godot event signal system to cleanly decouple nodes and state transitions.
- First Person Physics:** Implemented tactile first-person physics for dual wield grabbing and environmental interactions.
- Award Winning Execution:** Won 2nd Place Overall and the Best Execution Award at the Creative Technology Game Jam.

Obby but you're a balloon | Solo Developer **Roblox Studio** | 2025

- Custom Player Controller:** Engineered a custom player controller, completely overwriting the default Roblox character humanoid to support balloon physics, inflation states, and smooth floating mechanics.
- Viral Engagement:** Achieved over 3.75 million visits and thousands of concurrent players, integrating collectibles and unlockable skins to drive player retention.
- Client Authoritative Optimization:** Optimized map performance for low end devices by stripping complex collisions and aggressively maintaining client authoritative gameplay loops.