

SixtyWorlds

Take your 3D project online. Walk through spaces
instead of just viewing them.

ROLE	TYPE	YEAR
Solo Creator	3D Platform	2024-2025

CHAPTER 01

The Origin

From architect to UX designer — why walking through
matters more than rotating around.

The Problem

Sharing 3D was broken. Sketchfab lets you rotate around a model. But spaces are meant to be experienced from inside.

Architects, game designers, virtual tourists — everyone was stuck with static screenshots.

I came from architecture. I knew the gap between building a space and communicating it.

 SixtyWorlds platform
Platform gallery view

CHAPTER 02

Walk Through

First-person navigation in the browser. No plugins. No downloads.

Custom Physics

Three.js has no physics. I built my own collision system using Octree spatial indexing with capsule-based player colliders.

```
worldOctree.capsuleIntersect(playerCollider)
```

60 FPS collision detection in complex architectural spaces.

 Interactive exploration

First-person navigation with collision

CHAPTER 03

Scale


Uploading 30MB files without breaking the server. Or the bank.

Presigned URLs

Server never touches the file. Two-step upload: server generates temporary S3 URLs, client uploads directly.

Infinitely scalable. Near-zero hosting costs for file storage.

Same pattern used by AWS, Vercel, Supabase. I implemented it from scratch.

 Upload flow

Upload interface with preview generation

CHAPTER 04

Local-First

Developing at 30,000 feet. No AWS credentials. No internet required.

Dual-Mode Architecture

The Problem

AWS development is slow, requires internet, costs money. Onboarding takes hours.

The Flag

`LOCAL_DATA_MODE=1` switches implementations: same API, different backends.

The Result

JSON files instead of DynamoDB.
Filesystem instead of S3. Develop on planes. 10x faster iteration.

Cloud: DynamoDB + S3 → Local: JSON + filesystem

CHAPTER 05

Feedback

Comments at 3D coordinates. Scenes as spatial stories.


Spatial Context

"This corner feels cramped"

Generic comments don't work for 3D. I built a system where feedback attaches to exact 3D positions. Click anywhere, leave a note.

Scenes as storytelling

Save camera position + rotation. Link to comments. Teleport between views. Spatial narrative, not static screenshots.

 Platform overview

Platform overview with world gallery

Impact

NYU ITP Winter Show 2024

10 worlds uploaded by beta users

50+ contextual comments

4 min average session

60/40 desktop/mobile split

"This changes how I review student work. Instead of screenshots, I can actually walk through their spaces."

— NYU Professor, Winter Show 2024

Solo Creator

Frontend

Three.js, Custom physics engine, GLTF loading, Mobile joysticks, Canvas preview generation

Backend

Node.js, Express, AWS Lambda, API Gateway, DynamoDB, S3, Cognito

DevOps

AWS SAM, PM2, Local dev mode, Environment-based configuration, Zero-downtime deployments

SixtyWorlds

Not just a 3D viewer. A platform where spatial design meets play. Built alone, end-to-end.