CESAR DE MACEDO

UNREAL ENGINE DEVELOPER
INTERACTIVE APPLICATIONS & ENGINEERING VISUALIZATION

Visualization specialist with 25+ years of experience and Unreal Engine production at NEEZO Studios since 2023. I build interactive client applications in Blueprints, develop conceptual web 3D experiences and strengthen my Unreal C++ skills through structured training. My development focus is engineering simulation and digital twin applications.

25+ YEARS
Architectural visualization and client delivery

11 YEARS · NEEZO
Ontario — Unreal Engine production since 2023

BLUEPRINTS / C++
Production applications / practical training

WEB 3D + AI
React, three.js, AI-assisted development

Canadian citizen · St. Catharines, Ontario · open to relocation and hybrid work · languages: English and Portuguese

cesardemacedo@gmail.com · LinkedIn



Toronto Gateway — transit hub study, running in the browser

Self-initiated · 2026

LIVE DEMO https://toronto-gateway.pages.dev/

Interactive walkthrough of an estate with more than 30 rooms

A hilltop estate in a forest in the United States, delivered to the client as a real-time application. I built all of the interaction logic in Blueprints.

MY CONTRIBUTION — INTERACTION SYSTEMS

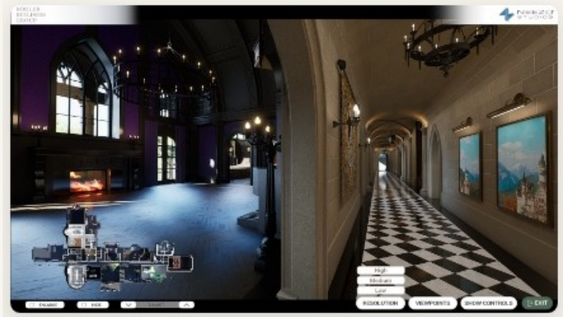
- First-person navigation across several levels, with floor switching
- Viewpoint system to jump directly from room to room
- High / medium / low quality presets to adapt the experience to different hardware capabilities
- Keyboard-mouse and gamepad controls, with an on-screen help panel
- Live mini-map that locates the visitor on every level



CASTLE ENTRANCE



PRIVATE THEATER



INTERIOR CORRIDOR



NAVIGATION CONTROLS

30+
navigable rooms

3
quality presets

2
control schemes

Residential building: four apartments, forty points of interest

A presentation application for a developer: the client walks through each apartment, opens points of interest and finds their way on the plan. All interactivity built in Blueprints.

MY CONTRIBUTION — INTERACTION SYSTEMS

- Four complete apartments with ten interactive points of interest in each
- Application menu: start, resolution, instructions, about, exit
- Keyboard-mouse instruction screen built into the application
- Mini-map that tracks the visitor room by room, with direct room access



INTERACTIVE HOTSPOTS



MAIN MENU



NAVIGATION INSTRUCTIONS



LIVING + FLOOR PLAN

4
complete apartments

40
points of interest

1
standalone application

Toronto Gateway: interactive infrastructure study

An independent conceptual transport-hub study built for the web with React, TypeScript and three.js. The experience combines a Blender-based interactive model, architectural imagery, spatial galleries and a construction timelapse.

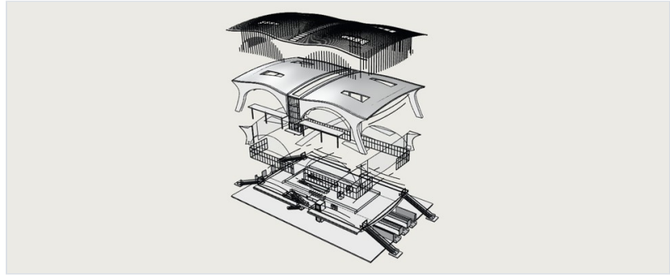
Exploded view
Four named groups the visitor separates and reassembles; the names come from the model.

First-person walkthrough
Move through the concourse and platforms, change level, switch layers on and off.

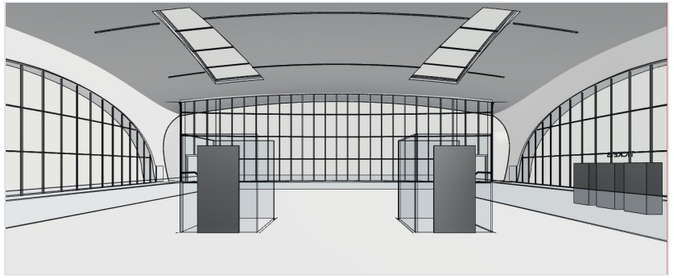
Scroll-controlled construction
Use the mouse wheel to explore and control every construction phase, moving forward or backward through the project.

4K construction film
Watch the complete construction sequence in 4K in the dedicated Film section.





Exploded view · four layers



Walkthrough · raised concourse

On demand
media and 3D loading

845 KiB
navigable 3D model

Static hosting
Cloudflare Pages deployment

Cesar De Macedo · Unreal Engine Developer

https://toronto-gateway.pages.dev/ · cesardemacedo@gmail.com

Obstacle Assault: a platformer in C++

A completed guided project from the Unreal Engine C++ Developer course (Udemy). Movement and game logic are written in C++; the level is tuned in the editor.

WHAT I CODED

- Moving and rotating platforms and obstacles driven by C++ actor classes
- Editor-exposed variables to tune speeds and paths without recompiling
- Implemented the course platformer logic as a guided learning project

Source code and gameplay video
github.com/CesarDeMacedo/ObstacleAssault-UE5-Cpp
youtube.com/watch?v=qlU-kdvmcsA

Professional development: Unreal C++ training and University of Colorado Boulder / Coursera Python for Scientific Computing, both in progress. Building-system simulation and digital twins are my next development focus.



Frames from the gameplay video

Full video (2:48) on YouTube

What I bring to an engineering team

CAPABILITY	EVIDENCE
Unreal Engine, Blueprints and C++	Unreal production since 2023; two client applications with interaction logic developed in Blueprints (2025, 2026); C++ game in UE 5.6 (training).
Interactive real-time applications	Multi-level walkthrough of 30+ rooms; residential application with 40 points of interest.
Real-time and web performance workflows	Unreal: lighting optimization and quality presets. Web: approximately 845 KiB compressed model and on-demand loading.
Infrastructure visualization	Toronto Gateway: a conceptual study of transport infrastructure, architectural layers and public space; not validated engineering documentation.
Versioned development workflow	Live React / TypeScript application, versioned in Git, with technical documentation.
AI tools to speed up development	Claude, Codex and ChatGPT daily for code, prototyping and documentation.
Project planning and management	Eight years running a studio from concept to delivery; eleven years in studio; Git / GitHub and Plastic SCM.
Frontend development and deployment	Designed, built and deployed Toronto Gateway on Cloudflare Pages.

LIVE DEMO **https://toronto-gateway.pages.dev/**

Application walkthroughs available on request.