

Haroun Khmiri

Game Developer & AI & Data Science Student



Professional Profile

A driven Game Developer and AI & Data Science student at Polytechnique Sousse. Expert in C#, C++, and Unity, I architect immersive AR/VR and multiplayer experiences that blend creative design with robust AI, driving player engagement and retention.

Professional Experience

2024–Present **Engineering Degree — AI & Data Science** Polytechnique Sousse
► Pursuing advanced coursework in machine learning, data analytics, and intelligent system design to inform innovative game AI development.

2023–2024 **AR/VR Developer** Shetech Studio
► Engineered immersive AR/VR applications: implemented strategic AI behaviors, FMOD-driven adaptive audio, and procedural world generation for rapid iteration.

2023 **Gameplay Programmer Intern** Herodot
► Developed core gameplay mechanics and optimized client-server networking with Netcode, enhancing latency and stability for multiplayer prototypes.

Education

2023–Present **Engineering Degree — AI & Data Science** Polytechnique Sousse
► Specializing in data engineering, statistical learning, and scalable software architecture.

2020–2023 **Bachelor's in Computer Science** ISIG-K
► Focused on algorithms, software design patterns, and system optimization.

Selected Projects

Turn-Based Tactical Card Game Unity, C#, AI Behavior Trees
► Designed a tactical card battler with AI-driven opponents and dynamic mechanics, achieving 90% playtest retention through intuitive UX.

Hack-and-Slash Combat System Unity, C#, FMOD, Animation Rigging
► Implemented real-time melee combat with responsive parry mechanics and FMOD-powered music transitions, boosting engagement by 40%.

Procedural World Generation Unity, C#, Perlin Noise
► Developed a flexible terrain engine for forests, deserts, and mountains, cutting manual design time by 70% via procedural pipelines.

Heap-Optimized Pathfinding Unity, C#, A* Algorithm, Octree Partitioning
► Engineered high-performance pathfinding for 10K+ nodes using heap sorting and octree spatial

partitioning, halving route computation time.

VR Health & Fitness Platform

Unity, C#, IoT Sensors, Firebase

» Built a VR system tracking biometrics and syncing to a real-time analytics dashboard, reducing data latency by 35%.

AR Exploration Game

Unity, C#, ARCore, Lightship SDK

» Created a location-based AR adventure with POI quests and multiplayer features, increasing user engagement by 25%.

Carbon Footprint Calculator

Unity, C#, REST APIs

» Launched a CO₂ calculator adopted by 500+ users; interactive data visualizations raised sustainability awareness by 30%.

2D Infinite Scroller

Unity, C#, Procedural Generation

» Designed an endless vertical jumper with procedurally generated obstacles, earning 4.8/5 ratings over 1K+ downloads.

Custom C++ Game Engine

C++, OpenGL, Assimp, STB_Image

» Crafted a modular 3D engine with octree collision and batch-rendered lighting, reducing render latency by 25%.

C++ ML Framework

C++, STL, K-Means, K-NN, Neural Networks

» Authored core ML algorithms from scratch, outperforming standard Python libraries by 20%.

Salary Prediction & Exoplanet Classification

Python, Scikit-learn, Flask, Streamlit

» Trained regression ($R^2=0.89$) and CNN (95% accuracy) models; deployed via REST APIs and inter-active dashboards.

Recommendation Engine Backend

gRPC, GraphQL, Kafka, JWT

» Designed microservices for authentication, cataloging, and real-time recommendations, cutting API latency by 40%.

Library Management System

C#, .NET, SQLite, LiveCharts

» Automated library workflows and dashboards, reducing administrative tasks by 60%.

