Qiwu Wen

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Summary

I am a **Computer Science undergraduate** with a strong passion for **game development and gameplay programming**. My goal is to build **engaging, immersive gameplay systems** by combining **technical expertise in C++ and Unreal Engine 5** with a deep understanding of game mechanics and player experience.

Unreal project website Link: https://jkouil.github.io/UnrealPage/

I have worked on **various gameplay and AI-driven systems**, focusing on **combat mechanics, NPC behaviors, and interactive game environments** on Unreal Engine 5. And additionally, my experience **in NLP and deep learning** enables me to explore **advanced AI techniques** to enhance **adaptive NPC behaviors, procedural dialogue generation, and intelligent decision-making systems in games**

Experience

Unreal project | Montreal, QC
01/2025 - 03/2025

- Developed a **Souls-like combat system** with **dodging, blocking, and attack combos** using **C++ & Blueprint**
- Implemented **AI behavior trees & perception** for enemy patrol and combat logic
- Optimized AI movement with *A pathfinding and NavMesh navigation**
- Created a **traffic simulation AI** where pedestrians and vehicles react dynamically to traffic light
- Unreal project website Link: https://jkouil.github.io/UnrealPage/

Laboratoire RALI | Montreal, QC
Intern student | 05/2024 - 09/2024
Conducted **fine-tuning(LoRA)** of **open-source Llama 3 LLM** to enhance social assistance robots' **elderly-friendly AI responses**

- Integrated **DPO-style preference tuning** into reinforcement learning-based AI model
- Benchmarked **real-time NLP AI models** using **human emotional feedback** and **content acceptance metrics**
- Utilized **NLP deep learning models (BERT, PyTorch, Hugging Face)** to classify **user emotions** for **prompt engineering optimization**
- Modified **open-source AI tools in C++** to enable efficient local deployment of LLM models, reducing reliance on cloud services and improving response time
- Final Report Link(French only):https://github.com/jkouil/IFT3150_PROJET/blob/main/Rapport%20Final%20du%20cours%20IFT3150.pdf

Skills

C++, Python, Unreal Engine 5, Object-Oriented Design (OOP) & Design Patterns , Git, SQL, Machine Learning, Artificial Intelligence, Reinforcement Leaning

Education

Université de Montréal | Montreal, QC
Computer Science | 12/2025

- Currently completing advanced courses in :
- **Data Structures & Algorithms**
- **Artificial Intelligence & Machine Learning**
- **Software Engineering**
- **Computer Graphics**
- **Operating System**

Languages

Chinese (Native), French – Fluent (Speaking & Writing), English – Fluent (Speaking & Writing)