Alessia Nigretti

Senior AI Programmer | Málaga, Spain | Email | LinkedIn | GitHub | Portfolio

PROFESSIONAL SUMMARY

8 years of professional experience in game development and an undividable attention for player experiences. I thrive both in collaborative environments, as well as when I am given full ownership over solving complex tasks. Supported by a strong design understanding, I am driven by my desire to build player-first experiences, in which AI plays a fundamental role towards immersion. I like to follow full processes to design and implement features leading them from technical proposals to production.

AREAS OF EXPERTISE

Utility AI
Behaviour Trees
Hierarchical Task Networks
Goal-Oriented Action Planning
Finite State Machines

Environment Query Systems
Smart Objects
Living Worlds
Influence Maps
Evolutionary Algorithms
Performance & Debugging Tools

FEATURE WORK
Battle Strategy AI
Ambient NPC Life
Player-assisted AI Control
Creatures AI
Combat Behaviours

TOOLS & FRAMEWORKS
C++ / Unreal Engine 5
Entity-Component Systems
Object-Oriented Programming
Perforce, Claude Code, ImGUI

MAIN PROJECTS

Chronicles: Medieval | C++, Unreal Engine 5, ECS, Perforce
- Vast, dynamic medieval sandbox with coop elements, powered by a variety of complex behavioural and tactical decision-making systems. Fully built on top of in-house ECS data-oriented framework.

Dune: Awakening | C++, Unreal Engine 5, ECS, Perforce
- Single- and multiplayer open world survival with RPG gameplay. Supported by a combat abilities system powered by UE 5's Gameplay Abilities System. Built on top of in-house ECS data-oriented framework.

SEED MMO | C#, Unity, ECS, Git
- Persistent society simulator MMO in which players collaborate in a single-shard world. Powered by Utility AI system managing decision-making process of persistent and player-driven agents. Built on top of in-house ECS data-oriented framework.

More projects on my portfolio.

PROFESSIONAL EXPERIENCE

Senior AI Programmer, *Raw Power Games* (2 years 2 months, 2024-2026) - Chronicles: Medieval
- Full lead and ownership over battle strategy decision-making and tactical reasoning framework via utility AI, from technical proposal to production, data-driving the approach to convert it into a fully design-authorable tool
- Ambient NPC life, living world and interaction systems with smart objects

AI Programmer, *CI Games* (7 months, 2024)
- AI creatures and animal behaviour via UE's GAS, BTs, FSMs, custom perception, memory and awareness systems
- Tethering and environmental reaction systems

Game Engineer, *YAGER* (1 year 9 months, 2022-2024) - Dune: Awakening
- Combat abilities and aggro mechanics via UE's GAS, BTs and perception systems
- Custom asset dependency analysis tool, contributing to a ~90% improvement in editor loading times

Game AI Engineer, *Klang Games* (2 years 8 months, 2019-2022) - SEED
- Agent decision-making framework via utility AI and smart objects in in-house ECS framework

Technical Evangelist, *Unity Technologies* (1 year, 2017-2018)
- Technical demo implementation and presentation delivery to audiences of up to 600 senior game developers worldwide

PUBLICATIONS

NPCs that Feel Alive: Achieving Variety and Complexity with Limited Resources, Game AI Uncovered Vol. 4, CRC Press, Feb 4 2026

Evolving intelligent behavior in a virtual world simulation using reinforcement learning combined with a genetic algorithm, NeurIPS, Oct 1 2019

EDUCATION & LANGUAGES

Computer Science and Artificial Intelligence (BSc), University of Sussex, 2015 - 2019, Brighton (UK)

Languages: English (full professional proficiency), Spanish (full professional proficiency), Italian (native)