Matteo Cavagnino

Programmer / Software Engineer

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Education

- **Master Degree, Computer Science**
  University of Milan (Universita' degli Studi di Milano)
  Vote: 105/110 | December 2019 - October 2022
  Relevant Coursework: Advanced Programming, Programming Special Techniques, Online Game Design and Development
- **Bachelor Degree, Computer Science**
  University of Insubria (Universita' degli Studi dell'Insubria di Varese)
  Vote: 105/110 | October 2016 - December 2019
  Relevant Coursework: Data structures and Algorithms, Programming, Concurrent and Distributed Programming

Technical Skills

- Programming Languages: C++, C#, Java, Python, JavaScript
- Game Engines: Unity, Unreal Engine
- Tools & Technologies: CMake, Git, Visual Studio, GitHub, DevOps, Jira
- Important Libraries: OpenGL, OpenCV, CUDA SDK, Boost, CPP STL, OMP
- Other Skills: Object-Oriented Programming, Agile Methodologies, Version Control, SQL, English (C1 certification)

Experience

Advanced Algorithms R&D Engineer (Current Position)

ACTEON GROUP - De Götzen, Fagnano Olona (VA), Italy | September 2023 - Current

- Developed software for a 3D real-time scanner using C++, CUDA and OpenGL
- I worked on many aspects of the pipeline, from point-cloud registration and 3D reconstruction to mesh alignment and post-processing

Software Support Engineering Specialist I

CAE, Sesto Calende (VA), Italy | December 2022 - September 2023

- Developed software for civil and military full-flight helicopter simulators (Graphics Engine and Flight controls) using C++ and OpenGL

Personal Projects

ShakEngine | Solo Project | C++ | (GitHub) https://github.com/Teo7297/ShakEngine
2D game engine developed from scratch

- Tools and Libs: C++, Cmake, Git, OpenGL, SFML, Dear ImGUI, GLSL, Visual Studio / VSCode
- Main features: SceneGraph collisions, Entity-Component Design, Resources management, Sprite batching, Scene and life-time management, Audio

Zombie++ | Solo Project | Unity, C# | (Showcased in Portfolio) https://teo7297.github.io/
3D first-person survival shooter against AI zombies, inspired by Call of Duty: Zombies. These are the main features from the code point of view:

- Intricate and flexible ability system that allows to integrate many passive and active abilities for the player
- Flexible game manager that adapts to map design (zombie spawns, perk machines, weapon wall-buys)