

KALOYAN IVANOV

Enschede, Netherlands • [zntki.github.io/](https://github.com/zntki) • linkedin.com/in/kaloyan-ivanov-ge/

ki.kaloyan.ivanov@outlook.com

PROFILE

I am a curiosity-driven Game Development student at Saxion University of Applied Sciences with a strong background in **C#/C++** and **Unity**. I have experience in **Gameplay**, **Physics**, **AI**, and **Graphics programming**, with a solid foundation in **3D Mathematics**, **Software Architecture**, and **Design Patterns**. My goal is to gain experience in the creative industry, where I can apply my programming knowledge and further enhance my skills.

COURSEWORK & SKILLS

First Year

Sep 2023 - Jul 2024

- Learned how to apply my **C# knowledge** to **gameplay**, **physics** and **algorithms programming** by utilizing a custom-made 2D game engine by the teachers.
- Developed my first fully functional **Unity 3D Game**, applying various **Software Architecture** techniques to ensure **maintainability** and **scalability**.
- Completed supplementary courses covering **Game** and **UI/UX design**, as well as professional skills like **Communication** and **Research**.

Second Year

Sep 2024 - Jul 2025 (Expected)

- Pursued advanced coursework in Graphics programming, with a focus on **3D Mathematics**, **C++**, and **3D Rendering using OpenGL**.
- Familiarized myself with more **Software Architecture** techniques, by applying **SOLID principles** and various **design patterns** while developing a **Unity 3D Tower Defense game**.

Group Projects

- Collaborated on multiple **group projects** (2-3 weeks), working closely with **Engineers**, **Designers**, and **Artists** to develop unique games.
 - **Effective communication** and **strong teamwork** allowed us to **navigate challenges** in a fast-paced development cycle and **successfully achieve our goals**.
-

TECHNICAL SKILLS

- **Programming Languages:** C#, C++, OpenGL (GLSL)
- **Tools:** Unity, SFML, GXPEngine (developed by teachers), Git, Visual Studio
- **Additional Technologies:** Figma, Tiled, Java, HTML, CSS (SASS), JavaScript (jQuery), MS SQL, ASP.NET Core MVC, Elixir, Erlang

PROJECTS & EXPERIENCE

C++

Sep - Nov 2024

- Participated in a **C++** course, exploring key concepts such as **memory management** through pointers and references, **CONST-ness**, OOP principles like **constructors** and **destructors**, **File I/O**.
- Designed and developed a **2D Battle Game** using the **SFML framework**, implementing **game object hierarchy**, **scene setup** by mapping JSON data into game objects, **sprite animations**, and **persistent high-score tracking** between sessions.
- Scored **10/10** on my final assessment.

ProjectX - First 3D Game in Unity

Jun - Jul 2024

- Completed a **Unity Game Scripting** course, covering fundamental Unity topics such as **Scene management**, **use of Prefabs**, **Transformations and Physics**, and **UI and Audio**.
- As part of the assignment for the course, I developed a **3D Horror Game** by applying the knowledge gained throughout the course, while maintaining good **Software Architecture**.
- Scored **10/10** on my final assessment.

3D Rendering with OpenGL

Nov 2024 - Present

- Independently studying **OpenGL** to expand my knowledge of **real-time rendering**.
- Thoroughly worked through the first two chapters of the '**LearnOpenGL**' book, focusing on **Coordinate Spaces**, **Camera Behavior**, and the **Phong Lighting Model**.
- Developed an interactive scene with Unity-style navigation, featuring **real-time lighting** from **Directional**, **Point** and **Spot lights**.

Physics Programming

Mar - Apr 2024

- Participated in a **Physics Programming** course, learning about various concepts around **Vector Math** operations.
- For the assignment, I chose to develop a **2D Pool simulation**, implementing **aiming functionalities**, **cue charging**, **ball-ball/line/line caps collisions**, and **cue ball spin modifier**.
- Scored **10/10** on my final assessment.

HellFryer – Unity 3D Split-Screen Co-op Game

Jan 2025

- Developed as part of a 3-week group project with a team of 6, including Engineers, Designers, and Artists.
- Established a clear **Git workflow** and **code architecture**, ensuring maintainability using **SOLID principles** and **design patterns**.
- Responsible for implementing the **co-op gameplay**, **role-switching mechanics**, **hunting equipment**, **monster behaviors**, and part of the **hostile items' interactions**.
- Successfully managed **project complexity**, meeting all planned milestones within the deadline.
- Achieved a final project score of **9/10** due to **strong teamwork**, **organization**, and **execution**.

EDUCATION

Bachelor of Creative Media and Game Technologies

Sep 2023 - Jul 2027 (Expected)

Saxion University of Applied Sciences

- Specialization: Game Engineer - Focus on Gameplay and Graphics programming

Mathematics and Computer Science

Sep 2018 - Jun 2023

High School of Mathematics "Dr. Petar Beron"

ADDITIONAL EXPERIENCE

Functional programming Software Development

Aug - Dec 2022

Internship at Quanterall Academy

- Erlang and Elixir software development

C# Web development

Feb 2021 - Nov 2022

Software University (SoftUni)

- C# with MS SQL and ASP.NET Core MVC framework software development.
-

LANGUAGES

English - C1

Bulgarian - Native

IMAGES





