

Thomas Jacobs

Software Engineer, Computer Scientist

Summary

I am a passionate software engineer with a firm foundation in Computer Science, starting with Games Programming at college and progressing to a specialisation in game engine and graphics programming during my undergraduate studies. Since then, my Master of Computer Science degree expanded my expertise to include cloud computing, quantum computing, and advanced software engineering, focusing on developing innovative, secure, and optimised software for websites, mobile, and wearable devices with a firm understanding of emerging technologies.

Significantly, my background has facilitated extensive and transferable experience in backend development, using languages such as Kotlin, C++, C, C#, and Python. Yet, this is not undermined by my front-end knowledge, I also have a strong understanding of front-end development, often utilising HTML, CSS, and JavaScript to structure information and instigate backend processes.

As a productive team member, I am well-versed in agile and waterfall methodologies, with experience in team and project management, particularly in DevOps practices. My strong communication skills enable me to collaborate effectively within teams and bridge the gap between technical and non-technical stakeholders.

Education

Master of Science, Computer Science (Software Engineering)

University of Suffolk, Ipswich, Suffolk (9/2023 - 8/2024)

In the duration of my Master's program, I honed my project and team management skills while expanding my expertise in advanced software engineering. I deepened my understanding of contemporary and emerging technologies, including leveraging cloud computing to develop accessible, cost-effective solutions and utilising containerisation platforms like Docker to create modular, loosely coupled systems that support continuous deployment.

Bachelor of Science (Hons), Computer Games Programming

University of Suffolk, Ipswich, Suffolk (9/2020 - 6/2023)

During my first year, I concentrated on mastering transferable programming skills, including the fundamentals of C and C++, advanced mathematics, data structures, and searching and sorting algorithms. This rigorous foundation equipped me for the advanced and challenging modules that followed, such as Graphics Programming, Artificial Intelligence, Tools Programming, Engine Programming, and Gameplay Programming.

Employment

Network Programmer

Alarming Ladder, Ipswich, Suffolk (2/2023-6/2023)

During my contract at Alarming Ladder, I specialised in network programming for a critical project. I developed a system using C# that enabled secure, peer-to-peer communication of in-game information between clients, leveraging Unity's Relay system. This approach eliminated the need for manual port forwarding but also adhered to the client's budget constraints by avoiding the costs associated with a dedicated server.

Software Engineer

BT - Adastral Park, Suffolk (4/2018-5/2018)

As part of my work experience, I gained valuable insight into programming fundamentals within a professional environment. Working as part of a team of four, we developed a website, gaining hands-on experience with front-end technologies (HTML, CSS, JavaScript) and back-end development (Ruby and Python). Crucially, we learned the importance of effective team management and regular communication, which was particularly beneficial when updating our source control using Git and GitHub.

Contact

Location: Suffolk, United Kingdom.

Email: thom_jacobs@outlook.com.

GitHub: jacobs-thomas.

Experience

Back-end development: C++, C#, Rust, Kotlin, and Java.

Front-end development: HTML, CSS, and JavaScript.

Scripting Languages: Lua, Ruby, and Python.

Source Control: Git, GitHub, and Plastic SCM.

Project Management: Agile, Waterfall, DevOps, and Scrum.

Shader Languages: GLSL, HLSL, and ShaderLab.

Advanced (3D) Mathematics: Calculus, Trigonometry, Probability, and Binary Arithmetic.

Games Development: Unity, Unreal, and Godot.

Soft Skills

Team Management: Conflict Resolution Strategies, Performance Evaluation, Project Planning.

Interpersonal Skills: Problem Solver, Adaptable, Empathetic, Self-Motivated, Innovative, Dependable, and Creative.

