

Will Hemsworth

Software Engineer | Tools Development | Automation

Phone: +44 7984 641568

Email: wm.hemsworth@gmail.com

Website: <https://bitloop.dev>

Summary

With over 17 years of experience in software development and game design, I have the necessary skills to tackle the most challenging technical problems, and adapt quickly to new technologies. I have a rich portfolio showcasing my work in developing games, simulations, visualizations, tools and automated solutions.

Experience

Software Engineering - Contract

[Sonae Arauco](#) - Remote (08/04/24)

- Interactive demo: <https://bitloop.dev/sonae/labelmaker>
- I developed software using Qt Widgets (C++) to automate the production of labels for industrial lubricants.
- This involved reading a database, parsing a wide variety of material codes, and allowing users to customize labels by their various properties. I dynamically generate SVG's to represent each lubricant type, and allow users to bulk-export hundreds of labels in PDF format.

Game Developer - Full-time

[Nomad Games](#) - Lymm (31/07/13 - 08/08/17)

I spent 4 years contributing to popular cross-platform titles such as 'Talisman: Digital Edition' and 'Talisman: Horus Heresy'.

My main responsibilities and accomplishments included:

- Implementing new expansion packs and game content.
- Programming AI opponents capable of handling millions of possible scenarios and handling edge-cases.
- Developing polished in-game user interfaces.
- Creating development tools to fine tune camera angles and texture UVs.
- Providing QA testers with the tools and resources necessary to detect, reproduce and report bugs with the required information on Mantis.
- Scaling up soak-testing capabilities for bug detection with heavily automated parallel processing (dozens of instances across 8+ machines).
- Developed the tools necessary to remotely collect and categorize detected bugs and areas for AI improvement.

My work helped detect critical issues prior to the release of updates / expansion packs, improved the gameplay experience for users, and streamlined the production pipeline.

Tutoring - Full-time

[Private](#) - Lymm (2018 - Present)

Teaching game design, programming and 3D modelling to students between ages 10-18 for approximately 7 years.

I believe this has helped me become an effective communicator and given me experience in breaking down complex topics.

Projects

<https://bitloop.dev>

An open-source modular C++ simulation and visualization framework and CMake project management system.

<https://tradevisual.com>

A semi-automated trade execution manager, market screener and strategy backtester.

Skills

C++23

[Qt](#) [Win32 API](#) [SDL2/3](#)
[OpenGL](#) [Cocos2d-x](#) [ImGui](#)
[CMake](#)
[vcpkg \(package development\)](#)

Web Development

[Typescript](#) [HTML5](#) [Canvas](#)
[Node.js](#)
[Node-API \(C++ Add-ons\)](#)
[Websockets](#) [Electron](#)

Other

[Python](#) [C#](#) [Git](#) [Github](#)
[Actions \(CI\)](#) [SVN](#) [Mantis](#)
[Custom UI frameworks](#)
[3D Blender Modelling](#)
[Algorithmic Trading](#)
[Actionscript 2/3](#)

Education

[University of Surrey](#)

- Computer Science - Diploma with Merit

[Priestley College, Warrington](#)

- Mathematics (Mechanics, Statistics, Further Maths)
- Physics
- Computing
- Electronics