

MComp Games Engineering student passionate about **tools, network and engine development** with a focus on **C++**.

Notable Projects

- Midori Engine** Game engine written in C++ built from scratch with an API-agnostic 3D renderer.
GNAT C++ library for easy peer-to-peer networking with a custom communication protocol.
WinTUI C++ library for easy to navigate, fully customisable UI in the Windows terminal.
Flip Unity 2D platforming game. A link to the WebGL build can be found on *szy.wtf*.

Education

Newcastle University [2015 - Present]

- Physics › Implemented collision calculations with impulse and reflections between squares and circles.
› A* pathing added for AI navigation around walls and obstacles.
- Dissertation › Investigated the implementations of **networking in games**.
› Implemented an **API written in C++** for **Client-Hosted** and **Peer-to-Peer networking**.
- Graphics › Gained familiarity with writing and debugging **GLSL Shaders** in OpenGL.
› Experience with **matrix manipulation** for rendering and animating scenes.
- Team Project › Coordinated a small team as the **lead programmer** in an Android app development project.
› Distributed tasks and deadlines across my team with the **Scrum** methodology.

Stage 4

Average of **TBD%**
Adv. G. Prog. 96%

Stage 3

Average of **75%**
Dissertation 74%
Games Prog. 82%
Graphics Prog. 80%
Concurrency 89%
Cryptography 85%

Stage 2

Average of **78%**

Stage 1

Average of **73%**

Attributes and Skills

C & C++



GoLang



Java & C#



GLSL Shaders



VB.Net



Javascript & Web



Use custom rice for my **Emacs** and **Linux** configurations.



Familiar with markdown and **LaTeX**.



Regularly maintain and add Github projects on my personal account: github.com/SzyJ.



Can fluently communicate in **English**, **Polish** and currently learning **Japanese**.



Enjoy **Skiing**, **Snowboarding** and **Skydiving** whenever possible.

Work Experience

Formica Ltd.

- 📄 Documented the **data storage, processing** and **flows** through all areas of the company, ensuring that all processing is **GDPR compliant**.
- 🔧 Improved company productivity by **developing scripts** allowing for **automation of processes** such as extracting data from scans of purchase orders.

👤 GDPR Compliance Intern
📅 Jun 2019 - Aug 2019
📍 Newcastle-Upon-Tyne, UK

- ❓ Analysed company systems producing documents relating to GDPR compliance.

PCMS

- 🔗 Wrote code primarily in **Java** using the **Spring** framework, including a **TDD and BDD workflow** with various JUnit frameworks.
- 📋 Worked on the development of new features for **web service APIs**. Deployed QA WAS and Oracle Database servers.
- Extensive use of **Mercurial version control** in a professional environment. **Developed scripts** automating many processes previously done manually. Familiar with **continuous integration** systems.
- 🏆 As a team, **came 1st** in the Warwick University Hackathon **representing the company**. Also represented the company in other events such as University Careers Fairs.

👤 Placement Software Developer
📅 July 2017 - July 2018
📍 Coventry, UK

- ❓ Worked on various projects from John Lewis and Marston's till software to RESTful external services. Implemented new features and fixed bugs reported through Jira.

IamVIP

- 📷 Work by myself in a large variety of different night clubs every weekend, **constantly adapting to new environments**.
- 👥 Interacted with 50+ people every hour whilst applying **marketing techniques** to sell as many keyrings as possible and developing **interpersonal skills**.
- 💰 Worked in very busy conditions while managing the money that I made from each customer.

👤 Nightclub Photography
📅 Feb 2016 - May 2016
📍 Newcastle-Upon-Tyne, UK

- ❓ Promoted and marketed myself as a photographer in busy nightclubs taking professional pictures and selling keyrings.

Other places of employment

Research Intern at EventPad: Finding contact leads to surpass the daily goal each day.

Shop Assistant in CEX in Manchester: Showing customers how electronic products work and testing incoming devices.

Low Voltage Appliance installation in Poland: Assistance with the installation of appliances such as alarm systems and satellite dishes for private homes and businesses.

References

References available upon request. Please contact me via e-mail or phone