

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

Always eager to further my own knowledge and share what I know with others.

## Notable Projects

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

## Education

### Newcastle University [2015 - Present]

- Parachute Club
- › Since joining the club in the first year, have been an **active member** in activities and events.
  - › Became **club treasurer** and helped plan out many events for the other members alongside gaining new responsibilities.

- Physics
- › Implemented **collision calculations** with impulse and reflections between squares and circles.
  - › **A\* pathing** added for AI navigation around walls and obstacles.

- 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 to 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