

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

## Notable Projects

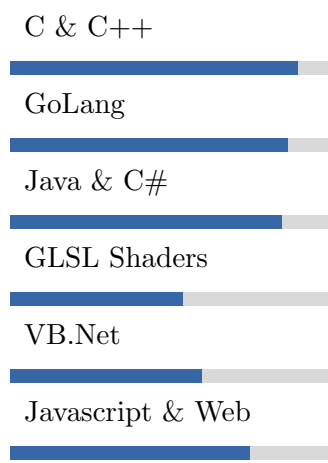
<b>Midori Engine</b>	Game engine written in C++ built from scratch with an API-agnostic 3D renderer.
<b>GNAT</b>	C++ library for easy peer-to-peer networking with a custom communication protocol.
<b>WinTUI</b>	C++ library for easy to navigate, fully customisable UI in the Windows terminal.
<b>Flip</b>	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]

Physics	<ul style="list-style-type: none"><li>Implemented <b>collision calculations</b> with impulse and reflections between squares and circles.</li><li><b>A* pathing</b> added for AI navigation around walls and obstacles.</li></ul>	<b>Stage 4</b> Average of <b>TBD%</b> <i>Adv. G. Prog. 96%</i>
Dissertation	<ul style="list-style-type: none"><li>Investigated the implementations of <b>networking in games</b>.</li><li>Implemented an <b>API written in C++</b> for <b>Client-Hosted</b> and <b>Peer-to-Peer networking</b>.</li></ul>	<b>Stage 3</b> Average of <b>75%</b> <i>Dissertation 74%</i> <i>Games Prog. 82%</i> <i>Graphics Prog. 80%</i> <i>Concurrency 89%</i> <i>Cryptography 85%</i>
Graphics	<ul style="list-style-type: none"><li>Gained familiarity with writing and debugging <b>GLSL Shaders</b> in OpenGL.</li><li>Experience with <b>matrix manipulation</b> for rendering and animating scenes.</li></ul>	<b>Stage 2</b> Average of <b>78%</b>
Team Project	<ul style="list-style-type: none"><li>Coordinated a small team as the <b>lead programmer</b> in an Android app development project.</li><li>Distributed tasks and deadlines across my team with the <b>Scrum</b> methodology.</li></ul>	<b>Stage 1</b> Average of <b>73%</b>

## Attributes and Skills



-  Use custom rice for my **Emacs** and **Linux** configurations.
-  Familiar with markdown and  $\text{\LaTeX}$ .
-  Regularly maintain and add Github projects on my personal account: [github.com/SzyJ](https://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