

# Aspen Thompson

Studying BSc Computer Science with Games Programming

---

Software engineer on course for a 1st class degree with specific interests in games programming with Unreal Engine and full stack web development, particularly using JavaScript, Node.js and React.

I started programming 10 years ago with Visual Basic, before quickly moving on to Java and web programming. Since then, I have focused most of my efforts on the web and games programming. I have also taken part in game jams, usually utilizing Unity LibGDX, obtaining first place at the Huddersfield Santander & Enterprise Game Jam and the Computer Science with Games Programming Student of the Year award.

I have gained great experience on my placement year with Beaconsoft, as well as my previous experience in industry with SNT, whilst my final year at the University of Huddersfield has seen me take on new challenges, including expanding my game engine from second year to include OpenCV support, creating a LIDAR 3D modelling tool that utilizes the iPhone for my dissertation, and creating of a game vertical slice for group project.

## Education

**University of Huddersfield, 2018 - Present**

**Computer Science with Games Programming, BSc (Hons).**

**Course Best Student 2018/19**

### First Year

#### **Hardware & Networks, 96%**

Gained knowledge of computer hardware, software and networking and created a virtual network with Cisco Packet Tracer.

#### **Computing Science & Mathematics, 91%**

Covered areas of discrete mathematics related to computing science, with a focus on searching and sorting algorithms and writing and implementing pseudocode.

#### **Studio 1, 86%**

Created utility and productivity tools using C, C++, and Bash Scripting in Linux. Implemented a piece of ray-tracing software in C++.

#### **Project 1, 82%**

Created a prototype game as a part of a team. Lead the development of an asymmetric multiplayer bullet hell card game in the Unity engine with online multiplayer networking.

#### **Software Design & Development, 79%**

Covered Java and Python programming, as well as modelling in UML. Created a piece of booking software in Java with JavaFX front-end from my UML.

### Second Year

#### **Computational Mathematics 1, 98%**

Covers algebra and develops analytical and numerical methods for solving equations. Introduces error analysis and proofs.

#### **Algorithms Processes & Data, 96%**

Develops knowledge of classic algorithms and data structures and with an emphasis on test-driven development.

#### **Team Project, 91%**

Create 3 games in three week long game jams, working in teams comprised of 2 Games Programming and 4 Games Design students.

#### **Relational Databases & Web Integration, 89%**

Study the concepts behind database design, and then design and implement using MySQL and PHP.

#### **Game Engine Architecture, 84%**

Gain knowledge of the Unreal Engine through practical implementation with progress reports.

#### **Real-time Graphics, 84%**

Using C++ with DirectX 11 and 12 to create 3D graphics software and HLSL shaders.

**The Open University, 2017-18**

**Computing and IT, CertHE.**

**Essential Mathematics 1, 99%**

**My Digital Life, 89%**

**Technologies in Practice, 84%**

**Heckmondwike Grammar School, 2009-14**

**13 GCSEs A\*-C**

**AFSMQ Additional Mathematics, A**

**GCSE Mathematics, A\***

**GCSE ICT, A**

## Technical Skills

**Main Languages:** JavaScript, TypeScript, C++, C, C#, Swift, Java, Python, PHP, HTML5, CSS3, SQL

**Frameworks:** Unreal Engine, Unity, SwiftUI, React, Redux, JUnit, MySQL, GraphQL

**Tools:** Windows, WSL, MacOS, Ubuntu, CentOS, Bash/Zsh, Vim, Git,  $\LaTeX$

## Work Experience

### Web Developer, Beaconsoft Ltd, July 2020 - Present

Originally started as a University placement, my contract was extended after the duration of the initial placement to allow me to continue to work with the Beacon team part time through my final year.

Worked throughout the stack, taking on responsibilities ranging from AWS configuration, MySQL database design and deployment, API development using PHP, and frontend development in React. I have been able to take part in a number of exciting projects and lead the development of Overlord, our in house admin console. Helped develop our app as part of a team of an agile team of just five into an award winning service.

### Part Time Poker Dealer, Grosvenor Casino, October 2018 - July 2021

Work as part of a close-knit team in a customer facing role requiring quick thinking and long periods of focus. Be responsible for the money on the poker tables during the game and ensure players keep within the rules.

### Apprentice Full Stack Web Developer, SNT Group, October 2015 - April 2016

Responsibilities included liaising with managers and clients to ensure designs and implementation were within specification. Working to tight time schedules to meet deadlines. Configuring Ubuntu servers for projects, usually using a LAMP stack but also using Node.js.

## Activities

### Community Involvement

Campaign for positive change on campus to help increase the quality of life and teaching on campus for disabled and LGBT+ students. Attend meetings between student union staff, university staff, and students to help provide a student perspective on necessary changes to create an inclusive campus.

As part of the LGBT+ Student Network in 2019, I was selected to attend the NUS LGBT+ Conference, where we debated and voted on policy changes and set the agenda of the NUS on LGBT+ issues for the year to come.

### LGBTQ+ Committee Trans and Non-binary Welfare Officer

Be a point of contact for students struggling with issues around the university caused by identifying as trans or non-binary. Liaise with the university and external organizations for additional support and facilitation of student needs.

Lead on campus support groups for trans and non-binary students, and facilitate the wider LGBTQ+ society activities in collaboration with the president and the male and female welfare officers.

### Hudd Drama Vice President

Facilitate the running of the society for the president by organising events, liaising with other committee members to get progress updates on projects, and with the student body for information on the wishes of our members.

Furthermore, run some sessions and activities, leading groups of between five and twenty students in one off exercises as well as longer projects.

### Mixed Sports Society Founder and President

Created a space for students who feel uncomfortable with or unable to participate in regular university sports clubs to participate in casual sport.

My responsibilities include managing the budget, locating and booking spaces on a weekly basis, sourcing equipment for activities, and engaging with society members to ensure the sports played are appropriate and any necessary adjustments are made for those with additional needs.

## References available on request