

# Andrew Xu

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## PROFILE

3rd year Computer Science student (Data Science & AI) at UCD with strong foundations in Java, C, Python and SQL. Experienced in software development and collaborative projects, with a strong focus on producing clean, functional code. Proven adaptability balancing part-time work with study whilst also actively engaging in keen hobbies such as computer hardware and video games. Actively seeking an internship opportunity to apply technical skills, contribute to real-world projects, and further develop professional and collaborative abilities.

## SKILLS

### **Programming Languages (Proficient)**

Java, C, Python, SQL

### **Programming Languages (Familiar)**

HTML, CSS, JavaScript, Haskell, Racket, Assembly

### **Software**

GitHub, GitLab, IntelliJ, VSC, CLion, Google Suite, MySQL, Microsoft Office

## EDUCATION & QUALIFICATIONS

### **BSc Computer Science with Data Science and AI**

Sep 2022 | Present

*University College Dublin*

*2nd Year GPA - 3.53*

- Current Semester Modules: Data Science in Python, Information Security, Probability, Intro to AI, Intro to Economics, Astronomy & Space Science
- *2nd Year Modules > A-*: Software Engineering Project 2, Functional Programming 2, Object-Oriented Programming, Discrete Mathematics, Linear Algebra 2

## PROJECTS

### **Personal Website for Portfolio and Future Web Applications [HTML, JS, CSS]**

Sep 2025 | Present

- Developing a website to showcase my portfolio and for future web applications in order to better understand web development and learn web applications.
- Made as a way to learn about front-end development and improve skills in HTML, CSS, and JavaScript, outside of formal education.
- Interested in web design and using existing knowledge of graphic design from After Effects to tinker with interactive elements and examine varying transformations and cubic bezier curves.

### **HexOust Board Game Java Implementation (4 Sprints) [Java, JavaFX]**

Jan 2025 | Apr 2025

- Worked in a team of 3 developing and designing an interactive Java implementation of the board game 'HexOust' over the course of a semester.
- Responsible for implementing the logic and rendering for the board of hexagons, using mathematics, geometry and JavaFX libraries.
- Optimised the rendering of the scene to preserve consistency and implemented letterboxing such that the game can scale itself whilst maintaining functionality in order to ensure operation on varying screen resolutions.

### **Relationship of Time Complexity vs Energy Consumption [Java, Python]**

Jan 2025 | Apr 2025

- Implemented a benchmarking application in Java to test the performance of many sorting algorithms (Treap Sort, PQSort, Collections Sort, Quick Sort, Merge Sort, Heap Sort) as well as the performance of data structures (Treap, AVL Tree, TreeMap).

- Designed benchmarking methods that measure the execution time and memory usage of each test, along with functions that produce different types of data to be input in order to test best, worst and random cases.
- Developed Python scripts for parsing energy consumption data from a hardware sensor logger and for parsing, handling and graphing the benchmark results in order to visualise the results.
- Produced a detailed technical report analysing energy-performance tradeoffs, providing critical insights into unexpected results.
- Adapted to working on a massive project as the sole contributor despite the project being designated for a team of 4, demonstrating resilience and an unbreakable endurance in working.

### **Interactive Gantt Chart with a Dependencies Feature [C]**

Mar 2023 | Apr 2023

- Implemented a C program that allows a user to add tasks and dependencies of said tasks into an interactive gantt chart that can be modified at will and is displayed via the terminal.
- Worked alongside a teammate and was able to designate specific tasks to each other as well as establishing a common ground for communications through the platform 'Discord'.
- Designed the print method responsible for rendering the gantt chart with ASCII and developed highly sophisticated methods of padding text such that the chart will adapt to the user's demands.

## **WORK EXPERIENCE**

### **Domino's Supply Chain Centre**

*Domino's Production Assistant*

Newbridge, Co. Kildare

Jul 2022 | Present

- Collaborated in a fast-paced environment to meet targets while following safety and quality standards.
- Maintained accurate production logs, adapted to rotating roles, able to problem solve during very demanding days.
- Balanced both work and study simultaneously despite long shifts, proving adaptability and reliability.
- Paid meticulous attention to detail in each assigned task as well as communicating effectively with the team supervisor.
- Demonstrated strong teamwork skills by working collaboratively with team members to achieve a common goal.
- Responsible for training new team members and demonstrating how to perform some tasks in a clear and concise manner.

## **INTERESTS**

### **Computer Hardware**

Primary hobby! Love taking apart, repairing and building both PCs and Laptops. Actively purchase 2nd hand parts or laptops to either repair, upgrade or use. Keep up to date with latest hardware news in regards to CPUs, GPUs and other components.

### **Graphic Design**

Extremely fascinated over the limits people can push when it comes to web design and graphic design. Occasionally mess around with Photoshop and After Effects to make animated GIF banners. Interested in Three.js for its 3D capabilities on the web.

### **Computer Gaming**

Enjoy gaming as a hobby but also fascinated over the more technical side such as datamining, modding and reverse engineering. Long-time competitive gamer (CSGO/CS2) and used to partake in LUA scripting but not too extensively. Interested in learning IDA and Ghidra some day.

## **REFERENCES**

Available upon request.