Andrew Xu

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**PROFILE**

* 3rd year Computer Science student (Data Science & AI) at UCD with strong foundations in Java, C, and Python.
* Experienced in software development and collaborative projects, with a strong focus on producing clean, functional code.
* Proven adaptability balancing part-time work with study.
* 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)**

Haskell, Racket, Assembly, HTML, Javascript, CSS

**Software**

VSC, IntelliJ, Github, Gitlab, MySQL, CLion, Google Suite, Microsoft Office

**EDUCATION & QUALIFICATIONS**

**BSc Computer Science with Data Science and AI** Sep 2022 | Present

*University College Dublin*

*2nd Year GPA - 3.53*

* A: Software Engineering Project 2, Functional Programming 2, Object-Oriented Programming
* A-: Discrete Mathematics, Linear Algebra 2
* B+ / B: Digital Systems, Databases and Information Systems 1, Algorithms

**PROJECTS**

**HexOust Board Game Java Implementation (4 Sprints)** 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.

**Analysing the Relationship Between Time Complexity and Energy Consumption** 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 as well as 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 Dependencies Implemented in 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** Newbridge, Co. Kildare*Domino's Production Assistant*Jul 2022 | Present

* Collaborated with supervisors and other fellow co-workers in a high paced environment in order to meet dough production targets.
* Maintained an accurate record of production figures with attention to detail demonstrating a sense of responsibility.
* Adapted to a constantly shifting routine where roles are rotated and was able to problem solve and work in tandem with co-workers ensuring no setbacks occur, building communication and teamwork skills.

**INTERESTS**

**Computer Hardware**

Extremely interested in computer hardware such as desktops and laptops and being able to repair, benchmark and optimise them in many different ways. Actively keep up with modern computer hardware developments in GPU and CPU architectures or SSD and RAM technologies.

**Graphic Design**

Very fascinated over the absolute limits one can push designs to, in particular, javascript and the use of Three.js to create 3D graphics and animations that can render in your browser.

**Computer Gaming**

Absolutely adore gaming as a hobby as well as a way to see the intricacies of software, such as how game mods work on a software level and how people datamine or reverse engineer some game in order to uncover never before seen information.

**REFERENCES**

Silas Johan Fieseler | Kernel Software Engineer, Utimaco IS GmbH

Lisa Xu | Product Engineer, Nory AI