DANIEL HARTGROVE

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Recent Computer Science graduate from the University of Nottingham. I have a strong passion for Object-Oriented programming but have cultivated an array of interdisciplinary skills. During my studies, I developed my skills through coursework and my dissertation, creating an experimental algorithm for natural language generation aimed at making role-playing game NPCs more interactive. I am eager to use the skills I have developed to solve challenging real world problems.

EDUCATION

BSc University of Nottingham June 2024
• Bachelor of Science (1st Class)

A LEVELS The Duston School and Sixth Form June 2021
• Computer Science – A*
• EPQ (Project based on AI future) – A*
• Mathematics – A
• Physics – B

TECHNICAL EXPERIENCE

• Worked on a prototype note-summary tool using the latest AI technology and web requests to convert large text into a customisable summary containing subject notes. This was created in React, with a backend in Node.js.
• Created a 3D timer-based resource management game using the Unity engine and C#, involving developing gameplay assets.
• Developed an experimental algorithm for natural language generation aimed at making role-playing game NPCs more interactive that could even run on low-end PCs
• Built a compiler for, and then extended the instruction set of, a language created by one of my university professors. I created this project in Haskell
• Created a prototype 'beat-em-up' style game using a proprietary C++ game engine
• Performed a security audit on a web server to reduce the number of vulnerabilities
• Extended an AES encryption algorithm to add Galois Counter Mode to add authentication
• Developed an application, backed by UNiDAYS, that used Google Maps data and UNiDAYS OAuth system to provide a fresher's scavenger hunt experience to the city of Nottingham
• Created a scheduling algorithm to maximise resources on a simulated CPU resources by creating process queues in C. This was done in parallel using mutexes to prevent race conditions caused by multiple cores accessing the same data queues.

• Developed experience in Artificial Intelligence through working on data science coursework and finding solutions in a search space
• Developed a web page using HTML, CSS, and JavaScript to allow a user to select, retrieve, and extend the data in a database using PHP and SQL.
• Created a maintainable software deliverable in Java using software engineering principles, version control (Git), test driven development (JUnit)
• Created a natural selection simulator in Python using OOP concepts

EXTRA QUALIFICATIONS

FREECODECAMP: Web Development, Python Development
I have successfully earned the badges for Web Development and Python Development

WORK EXPERIENCE

FREELANCE WEB DEVELOPER

Daniel Hartgrove Web Services: NOVEMBER 2022-PRESENT
I collaborated with clients to understand their unique brand vision and translate it into engaging website designs. I also offer an additional service to create high-quality social media content to enhance brand awareness and drive audience engagement. As a result, I have spearheaded successful rebranding initiatives for small businesses, boosting their market presence and revenue.

BARTENDER

The Hart, Duston: SEPTEMBER 2024-PRESENT
I have developed in-depth knowledge of various beverages and cocktail recipes, as well as provided consistently excellent customer service by anticipating and fulfilling customer needs. A key responsibility of mine was to maintain a high standard of cleanliness and hygiene in the bar area, and securing the building when closing at night.

OTHER EXPERIENCE

BUCS ATHLETICS
I competed at the BUCS level for Gaelic Football during my time at the University of Nottingham, competing against other universities in the midlands. I played reserve Full-Forward position 13 for the team.

FILM MAKING SOCIETY
I was a member of the University of Nottingham's Film Making Society, having directed and acted in many productions in the 2022/23 and 2023/24 film seasons. A film I acted in and aided in directing won best picture, and one of my directorial projects won an award for fan-favourite.