Aydan Eng

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Education

Carleton University **Ottawa, ON**

Honours Bachelor's of Engineering, Software Engineering, CO-OP | **GPA: 3.96/4.00** ***Exp. April 2027***

- *Scholarships & Awards:* President's Scholarship, Henry M. Tory Scholarship, Deans' Honour List
- *Relevant Coursework:* Data Structures and Algorithms, Data Management, Discrete Structures

Skills

Programming Languages: Python, Java, C/C++, Javascript, HTML/CSS, SQL
Framework/Tools: React.js, Electron.js, Next.js, Node.js, Matplotlib, NumPy, Git/Github, VS Code, Jira
Other: Object-Oriented Design, SDLC methodologies, UX/UI Design, Scripting, Adobe CC

Experience

Atria Court At Barrhaven - Waitstaff Team Lead **August 2022 - Present | Ottawa, ON**

- Managed the nutritional needs of **150+ residents** daily, ensuring personalized accommodations
- Streamlined serving processes, introducing innovative strategies that **reduced service and reset time by 20%**
- Trained, mentored, and supervised a team of **9+ staff members**, fostering attention to detail and high standards in hospitality practices

Computer Science and Math Tutor **September 2022 - Present | Ottawa, ON**

- Assisted students in improving their grades by an average of **15-20%** through personalized lesson plans and problem-solving strategies
- Developed custom coding exercises and explanations, enhancing student understanding of **Python, Java, and C**
- Provided **300+ hours** of one-on-one tutoring for key mathematical and technical concepts, including **calculus, algebra, discrete mathematics, data structures** and **algorithms**

Projects

Movie Database (Hackathon) | *React.js* | *Node.js* | *JavaScript* | *HTML/CSS* **October 2024**

- Built a dynamic React web application leveraging **Node.js for backend functionality** and **RESTful APIs from The Movie Database (TMDB)** to display a comprehensive movie catalog
- Designed a responsive and visually appealing user interface using modern CSS techniques for **seamless browsing across devices**
- Showcased current most popular movies with detailed information, including ratings, genres, and trailers.
- Collaborated with a peer to conduct **usability testing**, refining the design based on feedback

Text-Based Social Network | *C* | *Data Structures* **September 2024 - December 2024**

- Designed and developed a **text-based social network** application in **C**, simulating core Facebook functionalities in a command-line environment
- Implemented **user authentication**, **friend requests**, and **post-sharing** using structured data storage techniques
- Utilized **linked lists** and **hash tables** for efficient data management and retrieval of user interactions
- Conducted **testing** to ensure stability, scalability, and proper handling of user data within memory constraints

Sudoku Solver | *Python* | *Algorithm Optimization* | *Data Structures* **February 2024**

- Implemented an optimized **backtracking algorithm** to efficiently solve puzzles of varying difficulties
- Integrated a **timer function** and **visual feedback mechanisms** to enhance the user experience
- Utilized **2D arrays** to represent the Sudoku board and facilitate efficient traversal and validation
- Conducted **stress testing** for edge cases, ensuring reliability across a wide range of puzzle difficulties

Fractal Visualizer | *React.js* | *JavaScript* | *Java* | *HTML/CSS* **May 2023 - June 2023**

- Developed a **full-stack web application** for a client at the University of Ottawa that presents a visual representation of mathematical equations as fractals, allowing it to be represented as a interactable and visual pattern through various algorithms
- Utilised a **server-side API** for data retrieval and processing along with **React.js** and a **CSS** viewport to create an **interactive frontend interface** allowing users to render points and fractal representations using a user-inputted parameter
- Collaborated in a partnership utilising **project planning, SDLC principles** and **agile methodologies** to organise, schedule, and track planning, development, and team meetings over a period of 2 months