Shervin Darmanki Farahani

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Education

University of Toronto Toronto, ON

Bachelor of Applied Science in Computer Engineering + PEY *Expected 2028*

- Relevant Courses: Programming Fundamentals, Digital Systems, Computer Organization, Software Design and Communication

University of Toronto Toronto, ON

Bachelor of Applied Science in Engineering Science, Dean's List Scholar *Sep. 2023 – May 2024*

- Relevant Courses: Introduction to Computer Programming, Computer Algorithms and Data Structures

Experience

Front-End Developer August 2024

Hack the 6ix Hackathon *Toronto, ON*

- Collaborated with a team of 4 over the span of 36 hours to integrate front-end and back-end components, resulting in a cohesive, fast, accurate, functional, and visually pleasing web application.
- Implemented complex animations using JavaScript and CSS, improving user engagement by 30%.
- Designed over 10 prototype website layouts, refining user interfaces and interactions, which played a crucial role in achieving a polished final product for the hackathon project.

Embedded Systems Engineer February 2024

Make U of T Hackathon *Toronto, ON*

- Led a team of 4 during a 24-hour hackathon, demonstrating strong leadership and technical skills.
- Utilized Python's audio library and Google's API to enable voice input recognition through a Raspberry Pi, integrating machine learning algorithms (Naïve Bayes) that achieved 85% accuracy in waste categorization.
- Applied principles of time and space complexity to utilize 30% less memory, and increase processing speed by 20%, while employing systematic debugging approaches.

Projects

AI-Powered Calendar Scheduler | *Python, JavaScript, CSS, HTML* October 2024 – Present

- Developed a machine learning model using PyTorch to optimize event scheduling, achieving an 80% reduction in time required to find ideal times for user events based on historical data.
- Designed a predictive model with a multi-layer neural network, reducing event start-time prediction error by 25%
- Integrated the model with a user interface that allows dynamic event addition and real-time start-time suggestions, increasing scheduling accuracy by 30% based on type and duration of events.
- Leveraged Pandas, Scikit-Learn, and PyTorch to streamline data handling, preprocessing, and model training, creating a seamless data pipeline that cut data processing time by 50%.

Seam Carving Image Resizer | *C, Python* March 2024

- Implemented a content-aware image resizing program using seam carving, achieving an average of 40% reduction in image size while maintaining image fidelity.
- Used dynamic programming and Dijkstra's algorithm to remove seams with time complexity $\mathcal{O}(height \times width)$.
- Used Python to convert over 10 images between PNG and BIN file formats in testing.

Pong Ball Game | *C++* October 2024

- Designed and implemented a Pong game using object-oriented programming principles in C++, creating 2 classes (Ball and Player) with 5+ methods each to manage game functionality.
- Handled 100+ collision calculations to ensure precise ball interactions with paddles and boundaries.
- Processed 1,000+ frames in the game logic to ensure smooth functionality and responsiveness during gameplay.

Skills

Technical: C, C++, Python, JavaScript, TypeScript, Next.js, Node.js, Flask, Tailwind CSS, HTML, CSS, SciKit-Learn, PyTorch, Pandas, Verilog, MATLAB, LaTeX, Data Structures & Algorithms, Object Oriented Programming, Machine Learning, Embedded Systems, Digital Systems

Soft: Initiative, Organization, Tenacious Work Ethic, Interpersonal Communication, Resourcefulness, Teamwork, Critical Thinking, Problem Solving, Research, Attention to Detail, Time Management, Analytical Skills