Shervin Darmanki Farahani

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PROFESSIONAL SUMMARY

Results-oriented engineering enthusiast with expertise in JavaScript, HTML, CSS, C, C++, Python, and diverse engineering disciplines. Proven track record as a leader of many engineering design projects, showcasing strong planning and iterative design skills. Adept at fostering collaborative teamwork, critical thinking, and problem-solving, ready to contribute technical excellence to engineering initiatives.

EXPERIENCE

University of Toronto | Toronto, ON 09/2023 – Present

Programmer and Web Developer

- **Fitness Tracker Web Game**: Developed the core logic for a fitness tracker app in Python, processing over 100 real time calculations. Reimagined the project as a web game using JavaScript after over 10 mini projects in JavaScript, demonstrating proficiency in interchanging between Python and JavaScript. Achieved a 40% reduction in development time compared to a pure Python approach. Utilized over 100 lines of HTML and CSS to build a user-friendly interface, resulting in an 80% user satisfaction rating based on user feedback.
- **Seam Carving Image Resizer:** Implemented a content-aware image resizing program in C using seam carving, achieving an average 40% reduction in image size while maintaining image fidelity. Leveraged dynamic programming and a variation of Dijkstra's algorithm to identify and remove seams with a time complexity of O(height x width). Used Python to convert over 10 images between PNG and BIN file formats in testing.
- **Autocomplete Engine**: Implemented a high-performance autocomplete algorithm capable of processing large datasets, efficiently suggesting completions based on user input. Implemented binary search instead of linear search to demonstrate awareness of time complexity and improve processing times by 50%.
- **TOEFL Question Answering Model**: Engineered a learning model capable of answering TOEFL questions to about 70% accuracy based on just 2 text libraries, showcasing natural language processing and machine learning.

Make U of T Hackathon | Toronto, ON 02/2024 – 02/2024

Team Leader | Embedded Systems Engineer

- 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.

Hack the 6ix Hackathon | Toronto, ON 02/2024 – 02/2024

Team Leader | Front-End Developer

- 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.

SKILLS

Technical Skills: C, C++, Python, JavaScript, TypeScript, Next.js, Flask, Tailwind CSS, HTML, CSS, MATLAB, LaTeX, Electrical Engineering, Mechanical Engineering, Computer Science, Engineering Design, Computer Hardware

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

EDUCATION

University of Toronto, St. George Campus | Toronto, ON Expected May 2027

Bachelor of Applied Science, Engineering Science, Dean's List Scholar