

# Sriya Dhanvi Mokhasunavisu

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## Professional Summary

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- Enrolled in level 3 of the 4-year Honors Computer Science Co-op program at McMaster University, available for **4-16 months Co-op starting May 2025**.
- Strong programming skills in Python, C, Java, SQL, and Elm established through course work and projects.
- Highly collaborative team player with strong leadership abilities and excellent time management skills. Demonstrated ability to lead and collaborate effectively through coursework and volunteer experiences.

## Education

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**Bachelor of Applied Science, Computer Science**  
McMaster University

Sept 2022 – May 2027  
Hamilton, ON

- **Relevant Courses:** Programming using Python, Computer Architecture, Software Development using Java, Data Structures and Algorithms, Software Design using Web Programming, Databases, Data Science methods using R

## Technical Skills

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**Computer Languages:** Python, Java, C, Elm, Haskell, SQL (MySQL, IBM Db2), HTML, R

**Software & Tools:** MATLAB, Microsoft Office, LaTeX, Git, GitHub, JUnit

**Libraries:** Pandas, NumPy, Matplotlib, OS, Seaborn

## Experience

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**Lead Developer**  
WISE Club

July 2024 – Present

- Leading the redesign of the WISE Club website, including the development of new logos and site elements using Wix
- Developing a job board exclusively for WISE members, featuring member profiles, filtering options for employers, and a messaging system for seamless communication
- Enhancing user experience by creating an intuitive platform for employers to match with and contact potential candidates

## Projects

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**Ludo Game**

January 2024 – April 2024

- Engineered a multiplayer Ludo game app in **Elm**, leveraging **functional programming** and **GraphicsSVG** for a dynamic and visually appealing user interface
- Devised the app for **Parkinson's disease detection**, enhancing daily engagement for senior users through interactive gameplay elements
- Applied **Design Thinking** and **Norman's principles** to craft an intuitive and user-friendly experience, resulting in an increase in user satisfaction
- Analyzed user interaction data to identify and refine critical gameplay elements, boosting overall user retention

**Algorithm Implementation and Performance Analysis**

January 2024 - April 2024

- Developed key data structures and algorithms in **Python**, including searching/sorting, graphs, trees, and dynamic programming
- Executed **empirical experiments** to measure and compare algorithm performance, providing insights into efficiency improvements
- Investigated performance bottlenecks and optimized algorithms, achieving up to a 40% reduction in computational time
- Facilitated **practical problem-solving** through comprehensive design and implementation in simulated work

environments, leading to a 15% improvement in algorithmic solutions

### Shape Intersection

September 2023 - December  
2023

- Designed and implemented shape intersection functionality in **Java**, rigorously validated with **JUnit** to ensure robustness
- Demonstrated **strong organizational skills** through the development of a modular and scalable code structure, enhancing maintainability and extendibility
- Utilized Java design patterns such as **Composite, Iterator, and Singleton** to create a flexible and efficient system architecture
- Conducted performance analysis to optimize algorithm efficiency, resulting in a 20% decrease in processing time for shape intersection tasks

### Artificial Neural Network Development using Binary Classification

August 2023

- Constructed a **C-based** artificial neural network (ANN) for binary classification tasks, focusing on precise prediction of binary outcomes from input features
- Engineered a **modular code structure** incorporating key functionalities such as weight initialization, propagation, and parameter updating for efficient training
- Executed **comprehensive sensitivity analysis and debugging** to fine-tune model performance, addressing segmentation faults and overfitting by strategically adjusting key parameters

### Extra-Curricular Activities

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- Guided new international first-year students through the Ignite program, showcasing **leadership** and **teamwork** in a supportive environment while managing multiple responsibilities
- Volunteered with the INSPIRE program's student advisory committee, applying **problem-solving** and **teamwork skills** to contribute to course deliberations and enhance the undergraduate experience
- Welcomed and supported prospective students as a **Mac Eng Ambassador**, using **time-management** and **leadership skills** to coordinate events, answer inquiries, and engage in outreach efforts

### Languages

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**Professional Proficiency:** English

**Native Proficiency:** Hindi, Telugu