Induwara Kandapahala

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PROFESSIONAL SUMMARY

Aspiring Computer Engineering student with a focus on software development for robotics and autonomous systems. Equipped with hands-on experience in ROS, Python, and C++, I have led and contributed to competitive robotics projects, including key upgrades for autonomous functionalities in preparation for the University Rover Challenge.

EXPERIENCE

Software Lead, Space Exploration Alberta Robotics   **Aug 2023 – Current**
- Leading the upgrade of the existing Drive and Arm systems to achieve full autonomy, setting new benchmarks in performance and reliability for future competitions
- Researching and analyzing algorithms for off-road navigation, aiming to improve the rover's performance in variable terrains.
- Managing the software team, overseeing code quality, and project timelines, and facilitating cross-functional collaborations to ensure successful implementation of new features.

Software Member, Space Exploration Alberta Robotics   **April 2023 – Aug 2023**
- Developed the rover's control system using ROS and MoveIt, implementing modular, object-oriented code to ensure scalability and maintainability.
- Collaborated alongside mechanical and electrical sub-teams to engineer the programming logic for the rover's mobility and arm functionalities, resulting in precise movement control and task execution capabilities for the Candian International Rover Challenge.

PROJECTS

Role, Pathfinding Visualization (https://github.com/Indy1103/pathfinding_visualization)   **May 2023 – Jun 2023**
- Developed a pathfinding visualization tool using Python and Tkinter, allowing for an interactive display of graph traversal algorithms
- Implemented Depth-First Search (DFS) and Breadth-First Search (BFS) algorithms, enabling users to visualize and compare different pathfinding techniques in real time.

Role, Personal Website (www.indy1103.github.io)   **Aug 2023 – Sep 2023**
- Developed a responsive portfolio website using Bootstrap, optimizing for a wide range of devices to ensure accessibility and a consistent user experience.
- Designed the UI/UX to emphasize intuitiveness and ease of navigation, resulting in a platform that effectively showcases my technical skills and projects.

EDUCATION

BSc Computer Engineering Software, University of Alberta   **May 2026**
- Entrance Scholarship

Neural Network and Deep Learning, DeepLearning.AI   **Aug 2023**
- Certification

CS50, Harvard   **Aug 2021**
- Certification

SKILLS

Languages: Python (Fluent) | C++ (Fluent) | Java (Fluent) | HTML(Familiar) | CSS(Familiar)
Technologies: ROS | OpenCV | Gstreamer