Inuka Silva

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Education

McMaster University — Hamilton, ON
Candidate for Bachelor of Engineering (B.Eng.), Mechatronics Engineering — *Sept. 2025 - April 2030*

University of Toronto — Mississauga, ON
Candidate for Honours Bachelors of Science, Computer Science — *Sept. 2024 - April 2025*

Chippewa Secondary School (96%) — North Bay, ON
High School Diploma — *Sept. 2020 - June 2024*

- Schulich Nominee, IB, SHAD 2022 Alumnus

Technical Skills

Languages: Python, Java, R, JavaScript, HTML/CSS
Frameworks and libraries: NumPy, pandas, OpenCV, matplotlib, Streamlit, MediaPipe, Next.js, Tailwind CSS
Tools: Git, Photoshop, Illustrator, PyCharm, Onshape, Inventor
Soft Skills: Leadership, Teamwork

Leadership

Co-Captain, Software Engineer, Robot Driver — Jan. 2018 – April 2024
FIRST Robotics Team 1305 — *North Bay, ON*

- Canadian robotics team with longest world championships qualification streak
- 1 of 8 Canadian FIRST Robotics Dean's List Finalist in 2023
- Started and mentored 2 FLL, FTC, and FRC teams across Canada
- Over 500 volunteer and community involvement hours

CSS Student Ambassador — Sept. 2023 – Jan. 2024
Chippewa Secondary School — *North Bay, ON*

- Work with at risk students to complete assignments
- Organized and ran workshops for younger students

Experience

Post Secondary Summer Student - Engineering and Computer Science — May 2025 – Aug. 2025
Redpath Raiseboring Limited — *North Bay, ON*

- Used Sparkfun Arduino Apollo3 boards to create a data logger
- Created firmware to record data from IMU and store it in a csv file onboard, as well as transmitting it over LoRa
- Printed 3D enclosure components using Autodesk Inventor

Projects

Spotify Gesture Controller | *Python* — July 2024

- Developed a Python application which used hand gestures to control Spotify media functionalities
- Implemented MediaPipe Model Maker to create and train a gesture recognition model
- Used OpenCV library to capture feed from webcam

FRC Robot | *Java* — Jan. 2022 - April 2024

- Integrated autonomous path following and pose estimation with apriltags
- Implemented PID feedback loops and triple modular redundancy for motor control
- Developed code for a swerve robot
- Wrote and implemented code for the 2022, 2023, and 2024 competition robots

PID Visualizer | *Javascript, HTML and CSS* — July 2024

- Developed an interactive visualizer on PID control loops
- Used Ploty.js to visualize impacts of PID gains