

Sagar Syal

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LinkedIn: www.linkedin.com/in/sagar-syal | GitHub: www.github.com/Sugar873 | Portfolio: <https://sugar873.github.io>

Technical Skills

- **Programming Languages:** Python, C#, C, C++, Java, Rust
- **Data Processing Technologies:** NumPy, Pandas, Scikit Learn
- **Frameworks/Libraries:** Microsoft .NET, Junit, Bootstrap, flask, multi-threading, multi-processing, sklearn
- **Development Tools:** Git, VS Code, Jira, Slack, VMware, Microsoft Visual Studio, Docker, Microsoft Office
- **Operating Systems:** Linux, Windows, MacOS, Android, ROS
- **Cloud Platforms:** AWS, Azure, Google Cloud
- **Machine Learning:** NumPy, Scikit-learn, PyTorch

Education

CARLETON UNIVERSITY, *Ottawa, ON* - Bachelor of Engineering in Computer Systems Engineering

Professional Experience

Romaeris Corporation | Software Engineering Intern | May 2023 – September 2023

- Developed and maintained software for mission-critical drone flight applications using C and C++, ensuring robust and efficient performance, reducing system errors.
- Improved the error handling system, increasing its efficiency by significantly reducing downtime caused by errors.
- Conducted code reviews, debugging, and wrote test procedures; analyzed and implemented corrections for defect reports, ensuring high-quality deliverables and reducing defect rate by.
- Utilized development tools such as Microsoft Visual Studio, Git, Docker, VMware, and GitHub, and supported the migration of applications to cloud environments.

Oxford Learning Kanata | Tutor | September 2022 – April 2024

- Provided academic support in programming languages and computer science concepts.
- Developed custom lesson plans and teaching materials to enhance learning outcomes.
- Assisted students in understanding complex technical issues and improving their problem-solving skills.

Applied Projects

Autonomous Car Navigation & Mapping | September 2023 – April 2024

- Utilized ROS, C++, and Python to test and optimize algorithms, significantly improving the performance and reliability of autonomous car navigation systems.
- Designed and developed automated test cases and frameworks to ensure the quality and accuracy of mapping algorithms, showcasing skills in automation and ensuring high-quality deliverables.
- Applied multithreading for real-time data processing and socket programming for inter-component communication, using object-oriented programming (OOP) principles for modular design, demonstrating expertise in performance optimization and real-time processing.

Surgical Robotics Project | January 2024 – April 2024

- Programmed a robotic system specialized in laparoscopic surgery, utilizing Python, MATLAB, and Simulink to ensure precise control and efficient operation, reflecting strong skills in Python and programming for critical applications.
- Developed and executed automated test plans to validate the robotic system's performance, enhancing the accuracy and reliability of surgical procedures, highlighting capabilities in developing and managing automated testing frameworks.
- Applied machine learning techniques to enhance the robotic system's capabilities, utilizing analytical skills in linear algebra, differential equations, and control system architectures.