

ARYA SALWAN

SENIOR COMPUTER
ENGINEERING STUDENT

CONTACT INFORMATION

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Portfolio: aryasalwan.github.io

EDUCATION

Memorial University of Newfoundland

Bachelors of Computer Engineering

Co-op Program, (2021-2026)

AWARDS & ACHIEVEMENTS

- MUN International Undergraduate Student Scholarship (\$12,000) - 2021
- Verafin Scholarship (\$3,000)-2022

SKILLS AND ABILITIES

- **Programming:** Python, C#, Java, JavaScript, php, HTML, CSS, GoLang, SQL, Assembly, C/C++, VHDL and Swift.
- **Frameworks:** React.js, Node.js, Angular, ASP.NET, .NET MAUI, Django & Flask.
- **DBMS:** MongoDB, PostgreSQL and MySQL.
- **OS:** Linux, MacOS, Android, IOS, Windows, QNX, FreeBSD,, Embedded Linux & ROS
- **DevOps:** Git, Jenkins, Kubernetes, Docker, Ansible , GCP, AWS and Git
- **Network Engineering:** Proficient in RFC, TCP/IP, DHCP, DNS, UDP, etc protocols. Familiar with WireShark & Nagios
- **Hardware:** Proficient in circuit and PCB design. Familiar with FPGA programming and IntelQuartus. Experienced in hardware repair and network router/switch setup.
- **Teamwork:** Strong collaboration and leadership skills with a proven ability to collaborate effectively within a team and work independently as needed.
- **Other Skills:** Fluent in Fundamental, Technical and Quantitive analysis of financial markets. Skilled debator and public speaker.

RELEVANT PROJECTS

Open Source PDF Editor:

- A cross-platform PDF editing tool developed in .NET MAUI.
- Allows users to Merge, Split, Insert & Password protect PDF files & View PDF files in DarkMode

MUN Class Schedule Exporter:

- A chrome based extension developed in JS, that allows students to export their class schedule directly to apple or google calendar. Has 10+ weekly users.

S&P500 Overbought & Oversold Stocks Analyser:

- Developed using yfinance, pandas and TA libraries in python.
- Analyses S&P500 stocks on the bases of Relative Strength Index (RSI) and gives the user a list of most oversold and overbought stocks.



WORK EXPERIENCE

Software Developer and Computer Vision Researcher

Birch Scientific, St John's

(2023 September - December)

- Collaborated in a team to develop a SaaS-based data visualization platform using React.js, enabling users to upload data, generate dynamic graphs, and interact with 3D visualizations powered by Unreal Engine plugin.
- Developed equations and algorithms for scale space filtering (SSF) of 3D meshes using laplacian of gaussian technique.
- Extensively used VTK, Open3D, Trimesh, Gdist, pygeodesic, etc libraries to develop software for multiscale mesh visualization.
- Implemented computationally intensive Scale Space Filtering (SSF) algorithms on NVIDIA CUDA, utilizing parallel programming techniques to significantly enhance processing speed and accuracy.

Full Stack Software Developer

Blackberry, Ottawa

(2023 September - December)

- Engineered an internal test database tool called "BlackFish" to store automated test results from various teams.
- Designed an interactive GUI using .NET winForms for the data base tool, allowing the user to compare historical & current test results, generate reports and monitor trends.
- Extended Blackfish capabilities with REST API functionality to query, view, monitor, upload and compare test results seamlessly.
- Authored shell scripts to automate processes on Jenkins, improving deployment efficiency and reliability.
- Crafted unit and integration tests for Network Link Aggregation feature of QNX SDP 8.0.

Embedded Systems Software Developer

Instrumar Limited, St John's NL

(2023 January-May)

- Wrote a new driver in .net/c# for linking the new ADS based communication protocol from Beckhoff with the Instrumar Fiber System(IFS) and modified existing drivers for OPC use.
- Developed applications in GoLang & Java for upgraded Instrumar Fibre System. Assisted in the setup and deployment of Apache cloud stack for a kubernetes cluster based IFS system.
- Wrote a new drivers in .net/C# for linking the new ADS based communication protocol from Beckhoff with the Instrumar fibre system(IFS) and modified existing drivers for OPC use.
- Optimized and developed C++ code for Instrumar sensors to accommodate new data streams.

Network Software Developer

Information and Technology Services-MUN

(2022 May-August)

- Independently developed a UDP-based request tracking system with a chat room functionality using low-level network programming in python.
- Developed a Tkinter-based Graphical User Interface for client and host computers.
- Worked with electronic components, assisted clients with soldering, built and assembled circuits.
- Programmed microcontrollers like Rasberry Pi pico to be used as HID devices.
- Setup routers and switches.