ARYA SALWAN

SENIOR COMPUTER ENGINEERING STUDENT

CONTACT INFORMATION

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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, R, C#, Java, JavaScript, php, HTML, CSS, GoLang, SQL, Assembly, C/C++, VHDL and Swift.
- **Libraries:** PyQT, Pandas, Numpy, SciPy, Tensorflow, PyTorch, SciKit, VTK, Gdist, Jupyter, yfinance, ta
- **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
- **Soft Skills:** Excellent communication skills, skilled debater and public speaker.Strong collaboration and leadership skills with a proven ability to collaborate effectively within a team.
- **Network Engineering**: Proficient in RFC, TCP/IP, DHCP, DNS, UDP, etc protocols. Familiar with WireShark & Nagios

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
(2024 April - August)
- Collaborated on a team to build a SaaS data visualization platform with React.js, to generate dynamic graphs, and interact with 3D visualizations via an Unreal Engine plugin.
- Developed equations and algorithms for 3D mesh scale-space filtering using the Laplacian of Gaussian technique, utilizing VTK, Open3D, Trimesh, Gdist, and pygeodesic libraries 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.
- Crafted unit and integration tests for Network Link Aggregation feature of QNX SDP 8.0 and authored shell scripts to automate processes on Jenkins.

Embeded Systems Software Engineer

Instrumar Limited, St John's NL
(2023 January-May)
- Developed ST and ladder logic-based solutions for PLCs in accordance with client specifications.
- Developed software and networking solutions for the upgraded IFS based on a Kubernetes cluster. Assisted in the setup and deployment of Apache cloud stack.
- 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.
- Modified and developed C++ code for Instrumar sensors to accommodate new data streams and change bit order.

Network Software Developer

Information and Technology Services-MUN
(2022 May-August)
- Independently developed a UDP-based request tracking system with chat room functionality using low-level network programming in python with an interactive GUI.
- Headed a team of talented computing support staff, providing software and hardware solutions to clients.
- Designed and assembled electronic circuits, assisted clients with soldering and circuit design.
- Programmed microcontrollers like Rasberry Pi pico to be used as HID devices.