

Jayvirsinh Raj

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Education:

Dalhousie University, *Bachelor of Computer Science* (Sexton Scholar)

January 2022 – August 2025

Skills:

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|-------------------------------|--|
| Interpersonal: | Communication, Teamwork, Leadership, Problem-Solving, Adaptability |
| Programming Languages: | Java, C, C++, C#, Python, SQL, HTML5, CSS, JavaScript, PHP, Kotlin, Powershell |
| Frameworks: | JavaFX, Angular JS, React.js, NodeJS, Springboot, ASP.NET Core, NumPy, CAD |
| Concepts: | CI/CD, Docker, Agile, Test-Driven Development, Gitflow, Junit |
| Tools: | IntelliJ, Springboot, Visual Studio, Git, JIRA, AWS, PowerBI, Postman |

Work Experience:

Software Developer | *Freelance*

February 24 - April 24

- Collaborated on a JavaFX Wizard Application, resulting in a 25% increase in employee productivity by guiding them through complex tasks, thus effectively preventing significant rollbacks.
- Tailored visual themes to align with client branding requirements, guaranteeing 100% visual consistency throughout the project.
- Delivered cross-compatible and responsive application ensuring seamless performance across diverse screen resolutions.

Software Developer Coop | *Protocase Inc.*

September 23-December 23

- Utilized Test-Driven Development methodology to enhance application functionality, including enabling selection of multiple items from dropdown list and displaying active directory, resulting in 40% reduction in user errors.
- Pear Programmed to develop a Merging Algorithm to merge the key binding between MacOS and Windows reducing the space complexity to save users shortcuts and conserving 30% of users' shortcuts.
- Collaborated with the QA team to identify and resolve critical defects, leading to a 20% decrease in the frequency of post-release issues reported by customers.
- Modified CI/CD pipeline to automate building and archiving every release of the application with each release push to reduce the build and deploy time by 40%.

Teaching Assistant and Marker | *Dalhousie University*

January 24 - May 24

- Mentored 80+ students to excel in Introduction to programming, Java, and data structures.
- Curated 15+ lab exercises and projects related to Java Programming, Software Development and Algorithms.

Projects:

Trello Clone Application | *Spring Boot, React, and MySQL*

- Developed a CRUD project management app offering intuitive task management and collaboration features.
- Used Spring Boot to develop RESTful APIs, for performing operations on the data from frontend.
- Integrated LLaMA for (Natural Language Processing) NLP to extract task details, enabling sentiment analysis, topic modeling, and automatic tagging, improving task management and collaboration.

Text Compressor | *Java*

- Created a text compression algorithm using Huffman encoding that followed SOLID principles and reduces 65% of file size and 50% of processing time.
- Implemented multithreading to optimize the text compression algorithm, resulting in a 30% improvement in overall application performance and responsiveness.
- Improved code quality by implementing automated testing using Junit5, resulting in a 20% reduction in manual testing time and a 15% decrease in the number of bugs reported.

Sorting Visualizer | *PHP, Data Structures*

- Built a visualizer of Merge Sort, Quick Sort, Heap Sort, and Bubble Sort algorithm.
- Created random input arrays of varying sizes to provide users with the ability to visualize sorting algorithms on different datasets.
- Collaborated with the team to enhance the user interface, to increase in user satisfaction and engagement.

Leadership and Extracurricular:

- **Vice President – External** at Dalhousie Computer Science Society.
- Presented an optimal solution in **SHACKS 2022 Hackathon** organized by Scotiabank.
- Secured **National Rank 12** at Technotholon organised by IIT G (*Indian Institutes of Technology*).