# **SAWAN RIJAL**

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computer science student with progressive experience writing code and designing solutions. Seeking a challenging role as a Software Engineering Intern. Adept at working effectively in fast-paced, deadline-driven settings that demand strong organizational and analytical skills.

**Personal Website:** https://mysite-main.vercel.app/

#### **EDUCATION**

### UNIVERSITY OF WINNIPEG

Winnipeg, MB

Bachelor of Science in Computer Science

Jan 2022-present

• **Overall**: (GPA: 3.3/4.0)

• Relevant Coursework: Introduction to Computing, Programming Fundamentals, The ObjectOriented Paradigm, Data Structures, Database Management Systems, Web Design and Development, Algorithms, Software Design and Development

## **ACADEMIC PROJECTS**

# **Software requirements and Analysis**

- Developed a comprehensive traffic management system leveraging various data collection techniques including interviews, questionnaires, and user feedback to ensure a thorough understanding of user needs and system requirements.
- Utilized Agile software development methodologies to iteratively design and develop the system, fostering continuous collaboration with stakeholders and enabling flexibility to adapt to evolving requirements.
- Employed tools such as user stories, use cases, and wireframes to facilitate clear communication and alignment of project objectives among team members and stakeholders.
- Conducted thorough requirement analysis, including functional and non-functional requirements, to ensure the system meets both user expectations and technical constraints.
- Implemented techniques such as prototyping and user testing to validate design decisions and refine the system iteratively based on user feedback.

# **Advanced Internet Programming**

- Engineered a dynamic e-commerce web application using modern technologies such as React.js, MongoDB, and the Next.js framework to deliver a seamless and responsive user experience.
- Integrated user authentication and authorization functionalities to provide personalized shopping experiences and secure transaction processing.
- Utilized RESTful APIs to interact with backend services, ensuring efficient data retrieval and manipulation.
- Implemented features such as product browsing, searching, and cart management to enhance user engagement and facilitate seamless navigation through the application.

- Employed responsive design principles to optimize the application for various devices and screen sizes, ensuring a consistent user experience across platforms. **Data Structures and algorithm**
- Explored fundamental data structures such as arrays, linked lists, stacks, queues, trees, and graphs, understanding their properties, operations, and applications in solving real-world problems.
- Implemented various sorting algorithms including bubble sort, selection sort, insertion sort, merge sort, and quick sort, analyzing their time and space complexity to make informed choices based on specific use cases.
- Applied algorithmic techniques such as recursion, dynamic programming, and greedy algorithms to solve algorithmic challenges and optimize solution efficiency.
- Leveraged coding platforms and competitive programming contests to practice algorithm implementation, problem-solving skills, and algorithmic analysis, honing proficiency in algorithm design and optimization techniques.
- Collaborated with peers through code reviews and pair programming sessions to gain insights, exchange ideas, and enhance understanding of data structures and algorithms.

#### ADDITIONAL SKILLS

- Technical skills: HTML5, CSS, JavaScript, ReactJS, jQuery, Bootstrap, HTML/CSS, CSS3, SASS, JS, C, React.js, nextjs, mongodb, and SQL Server
- Expertise in programming & coding, solution design, project management, software testing, database management, product development, and Agile methodologies.