

# Rishi Gandhi

St. John's, NL, Canada

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## Experience

### School of Pharmacy – Memorial University of Newfoundland

September 2023 - Present

*Bioinformatics Developer*

*St. John's, NL*

- Spearheaded the creation of an advanced protein secondary structure display system to surpass the industry standard, STRIDE.
- Programming Languages: Python
- Libraries: BioPython, Matplotlib, Tkinter, PyTest, NumPy
- File Handling: Reading and processing PDB files converted to text and various other formats.
- Algorithmic Logic: Created an algorithm for parsing and extracting relevant information from complex data.
- Version Control: Utilized Git and GitHub for source code management.
- Technologies Used: Python, Tkinter, BioPython, PyTest, NumPy, Protein Data Bank, GitHub, Conda

### Regional Analytics Laboratory (RANLab)

September 2022 – April 2023

*Tech Expert/Advisor*

*St. John's, NL*

- Database Management: Handled the upgradation of the lab's database system, ensuring compliance with required specifications.
- Research and Analysis: Conducted thorough research on alternative database systems and provided valuable insights for decision-making.
- Collaboration: Worked closely with the team to analyze, recommend, and implement a cost-effective database solution.
- Project Management: Contributed to a seamless transition during the database upgrade process.
- Performance Optimization: Implemented improvements to the database system, enhancing overall performance and reliability.
- Technologies Used: MySQL, Python, R, RStudio, Jupyter Notebooks, Matplotlib, Seaborn, TensorFlow, Slack

## Education

### Memorial University of Newfoundland

September 2020 – Present

*Bachelor of Science in Computer Science (Smart Systems), Minor in Business Administration*

*St. John's, NL*

## Projects

### Sudoku Solver | JavaScript, Genetic Algorithm, Roulette Wheel Selection, HTML 5

October 2023

- Implemented a genetic algorithm in JavaScript for optimization problems, employing roulette wheel selection, crossover, and mutation.
- Developed a Sudoku fitness function using OOP, sets, and logical thinking.
- Organized code into modular functions for reusability, following software development best practices.
- [GitHub Repository](#)

### Reinforcement Learning | JavaScript, Genetic Algorithm, Roulette Wheel Selection, HTML 5

November 2023

- Implemented Q-learning in JavaScript, creating a modular Reinforcement Learning class with GUI integration.
- Applied mathematical concepts, followed best software practices, and collaborated effectively with external components.
- [GitHub Repository](#)

### Last Day Survival | Visual C++

December 2023

- Designed video game aspects such as graphics, scripts, and a user interface using Visual C++.
- Followed Agile Software Development Cycle while maintaining an online repository using GitHub.
- [YouTube Trailer](#)

### Ping-Pong AI Opponent | Python 3.x, Pygame

January 2024

- Developed a newer version of Ping-Pong, to test AI algorithms for opponents.
- Implemented real-time ball and paddle movement, collision detection, and user interface elements, emphasizing attention to detail and algorithmic thinking.
- [GitHub Repository](#)

## Certifications

### Bloomberg Market Concepts

January 2024

Credential ID: <https://portal.bloomberforeducation.com/certificates/XXUQ4wagDCUqi6AcPZT4djj7>

### Fundamentals of Digital Marketing

February 2024

Credential ID: <https://skillshop.exceedlms.com/student/award/bnkWcznYPTen9NfVYCDMXctm>