# Rudra Patel

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Aspiring for internship roles in software development and data analysis, equipped with expertise in Java, C++, Python, and a solid computer science background

## EDUCATION

**Rutgers University, New Brunswick, NJ** Aug 2022 – Dec 2024 (expected)
Bachelor of Science, Computer Science
**Related Courses**: OOPS, Intro to Computer Science, Data Structures & Algorithms, Computer Architecture, Software Methodology, Data Management, Data Visualization, Systems Programming, Numerical Analysis, Discrete Math

## Skills

- **Programming Languages:** Java, C, C++, Python3(NumPy, Pandas, Matplotlib), R, MATLAB, Maple, Android development
- **Web Technologies:** HTML, CSS, Bootstrap, JavaScript, PHP, Git
- **Operating Systems:** Linux, Windows, MAC
- **Database Systems:** MySQL, MongoDB, Oracle SQL, PostgreSQL
- **Soft Skills:** Problem Solving, Time Management, Critical Thinking, Collaboration, Public Speaking

## ACADEMIC PROJECTS

***Chess Game Developer* | Java, OOPs, ASCII Art, JavaFX, Android** 01/2024 – present

- Developed a strategic chess game in Java with advanced algorithms, full move validation, and check/mate detection
- Implemented a sleek ASCII art UI, optimized data structures for smooth user interaction, and extended the game to Android
- Designed game logic, managed player turns, board updates, and win conditions for enhanced gameplay experiences

***Kindergarten Classroom Simulation* | Java, OOPs, Linked List, Arrays** 01/2023 – 05/2023

- Developed a comprehensive project, using Singly Linked Lists, 2D arrays, and Circular Linked Lists to model classroom activities
- Efficiently managed student entry, seating arrangements, and a musical chairs game within the simulation
- Implemented fair student seating logic based on seating availability and height order, enhancing gameplay realism

***Huffman Coding for Text Data Compression* Java, OOPs, Graph, Trees, Array** 01/2023 – 05/2023

- Designed and implemented a highly efficient Huffman Coding algorithm in Java, achieving up to a 60% reduction in file sizes
- Ensured data integrity throughout the compression process, demonstrating advanced expertise in algorithmic efficiency and accuracy
- Developed and applied graph traversal algorithms (DFS and BFS) to efficiently explore and analyze graph structures, solving problems like finding shortest paths and detecting connected components

## ACHIVEMENTS

**Kaggle Competition** 09/2022 – 12/2023

- Secured a coveted top 3 position out of 250 participants through a data-driven approach focused on predicting Citi Bike demand
- Implemented innovative feature engineering techniques, including the integration of weather and holiday indicators, significantly boosting model accuracy
- Conducted fine-tuned hyperparameter optimization within R, aligning with competition guidelines to optimize models for efficient and CSV-ready predictions