Rudra Patel
Jersey City, New Jersey, 07307
Rrp3827@gmail.com | LinkedIn | GitHub | Portfolio

Seeking internship and full-time opportunities in software development and data analysis, leveraging my proficiency in Java, C++, Python, and strong foundation in computer science. Eager to contribute innovative solutions and collaborate within dynamic teams to drive impactful results in the tech industry.

EDUCATION

Rutgers University, New Brunswick, NJ **Aug-22 – Dec-24(Expected)**
Bachelor of Science, Computer Science
Related Courses: Intro to Computer Science, Data Structures & Algorithms, Computer Architecture, Software Methodology, Data Management, Data Visualization, Systems Programming, Numerical Analysis, Discrete Structures

SKILLS

Programming Languages: Java, C, C++, Python3(NumPy, Pandas, Matplotlib), R, PHP, MATLAB, Maple, Android development

Database Systems: MySQL, Microsoft Access, Oracle SQL

Web Technologies: HTML, CSS, Bootstrap, JavaScript, Git

Other Skills: JavaFX, Memory management, File I/O, File systems, Process management, IPC, Multitasking, Networking

PROJECTS

Chess Game Developer | Java, OOPs, ASCII Art, JavaFx, Android **Present**

- Chess Engine Architect: Built a strategic chess engine in Java using advanced algorithms, featuring full move validation, check/mate detection, special moves, and file-based input/output for comprehensive gameplay and analysis.
- UI Craftsman: Designed and implemented a sleek ASCII art UI in Java, optimizing data structures for smooth user interaction and delivering an engaging visual experience despite graphical limitations.
- Cross-Platform Mastermind: Successfully translated the chess engine and UI to Android, showcasing adaptability and expanding gameplay potential to mobile devices.

Kindergarten Classroom Simulation | Java, OOPs, Linked List, Arrays **Spring '23**

- 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, Tress, Array **Spring '23**

- 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.

ACHIVMENTS

Kaggle Competition **Fall '22**

- 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.