

# Harshil Machhi

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## EDUCATION

**Rutgers, The State University of New Jersey**

**New Brunswick, NJ**

*B.S. in Computer Science; B.S. in Data Science*

*May 2025*

- **Relevant Coursework:** Data 101, Calculus II, Data Structures, Linear Algebra, Discrete Structures I, Computer Architecture, Discrete Structures II, Data Management for Data Science, Principles of Information & Data Management

## PROFESSIONAL EXPERIENCE

**Rutgers University – New Brunswick**

**New Brunswick, NJ**

*Learning Assistant*

*Aug 2023 - Present*

- Collaborate with over 150 students and faculty, leading to a 25% improvement in the learning environment feedback scores, fostering an atmosphere of mutual support and teamwork, dedication, growth, and understanding
- Assist 60+ students weekly, leveraging analytical thinking, resulting in an average 20% improvement in their exam scores and a notable increase in their ability to confidently tackle complex mathematical problems

**POWER Changes Lives Inc.**

**Edison, NJ (Remote)**

*Project Coordinator Intern*

*Aug 2022 – Nov 2022*

- Designed and implemented an automated data entry system for onboarding restaurants, streamlining processes which led to a weekly time savings of 10 hours and increased data accuracy by 30%, and enhanced overall operational efficiency
- Developed a program to automate the restaurant onboarding process, reducing manual interventions by 80%, leading to dispatching notices and approvals for 100+ restaurants, ensuring 95% compliance, and streamlining operational workflow

## PROJECTS

**FlightLink – Java, SQL, HTML, CSS, JavaScript, JDBC**

**October 2023**

- Designed and implemented a relational database system to support online travel reservation operations, utilizing MySQL, Java, and JDBC for seamless connectivity between the user interface and the core database structure
- Developed a web application to provide users with dynamic search capabilities, real-time flight reservations, and user access controls to main data integrity and security, while also creating a responsive web application
- Devised and executed data analysis tools within the travel system, enabling extraction of pivotal metrics like top-generating revenue flights, showcasing an aptitude for deriving actionable insights from complex datasets.

**RURideShare – Python, SQLite3, HTML, CSS, JavaScript, Flask**

**October 2023**

- Architected and executed a user-centric ride-sharing web application for the Rutgers community; harnessed Python (Flask) to craft back-end functionalities like user authentication, ride listing, and a real-time messaging system
- Integrated Google Maps API to provide real-time location tracking within the app, enhancing user trust and convenience by enabling them to track drivers and fellow users, which was pivotal in ensuring safety and reliability

**Spotify: This or That Game – Python, JavaScript, SQL, HTML, CSS, Flask**

**July 2023**

- Developed an interactive web-based application for a “This or That” game that utilizes Spotify’s API to analyze users’ listening history and present two artists for comparison, offering insights into their music preferences
- Transformed raw listening data into an engaging and interactive user-friendly interface with JavaScript, showcasing strong data manipulation and visualization

## LEADERSHIP EXPERIENCE

**Math League International Summer Tournament**

**Ewing, NJ**

*Counselor*

**July 2023**

- Managed and mentored a diverse group of over 300 international math students, ensuring a productive and harmonious environment leading to a 15% increase in positive feedback compared to previous years
- Employed strategic problem-solving techniques to address and resolve 200+ student-related issues, ensuring participant engagement and the smooth, on-schedule progression of the tournament’s events.

## SKILLS

**Languages & Frameworks:** Java, C, Python (including Django), SQL, PHP (Laravel), JavaScript (React)

**Data Skills (Python & R):** Data Manipulation, Visualization, Analytics, Database Design & Optimization