Manav Sachin Patel

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PROFESSIONAL SUMMARY

Final-year Computer Science student at Rutgers University with strong foundations in data structures, algorithms, databases, programming languages, computer systems, and networking. Experienced in Java, Python, C, SQL, OCaml, and x86 Assembly, with hands-on academic projects spanning software development, mobile application development, data analysis, database design, reverse engineering, and network analysis. Seeking opportunities to contribute to software engineering, data engineering, or systems-oriented development in a technically challenging environment.

EDUCATION

Rutgers University – New Brunswick, NJ
- B.S. in Computer Science · 2023–Present
- Expected Graduation: May 2026
- GPA: 3.25 | Dean's List: Fall 2024 | Dean's List: Fall 2025
- Key Coursework: Data Structures, Design & Analysis of Algorithms, Discrete Structures I & II, Computer Architecture, Database Management, Software Systems Design, Web Application Development, Unix/Linux Operating Systems, Software Testing and QA

San Francisco State University – San Francisco, CA
- B.S. in Computer Science · Fall 2022 – Spring 2023
- GPA: 3.5 | Dean's List: Fall 2023

EXPERIENCE

Rutgers Business School – New Brunswick, NJ
Exam Proctor | Sept 2025 – Present
- Monitored classroom exams to ensure academic integrity and fair testing conditions.
- Verified student identification, distributed and collected materials, and maintained confidentiality.
- Reported irregularities and supported faculty during testing sessions.

TECHNICAL SKILLS

- Programming Languages: Python, Java, C, SQL, OCaml, x86 Assembly, JavaScript (HTML/CSS/JS)
- Libraries / Tools: Pandas, NumPy, Matplotlib, Jupyter Notebook, VS Code, GDB, objdump, Git, Wireshark
- Web & Networking Technologies: HTML, CSS, JavaScript, DNS, UDP-based Networking, Traceroute, Packet Analysis (Wireshark), Internet Protocol Fundamentals
- Core Concepts: Data Structures & Algorithms, Design & Analysis of Algorithms, Programming Languages & Type Systems, Functional Programming, Database Management Systems, Computer Architecture, Discrete Mathematics, Operating Systems, Web Application Development, Networking Fundamentals, Debugging & Reverse Engineering, Software Development

PROJECTS

Android Photo Management App (Java, Android Studio)
- Developed a full-featured Android application in Java using Android Studio for managing photo albums and images.
- Implemented core features including album creation, photo browsing, tagging, search with auto-completion, and slideshow navigation.
- Ported and refactored core application logic from a JavaFX desktop application to Android, adapting the UI using XML layouts.
- Applied object-oriented design principles, event handling, state management, and version control using Git and GitHub.

Spider-Verse Data Structures Project (Java)
- Designed and implemented graph algorithms including adjacency lists, hash tables with rehashing, DFS, BFS, and Dijkstra's algorithm.
- Analyzed connectivity and shortest paths while emphasizing algorithmic efficiency and object-oriented design.

Music Database Project (SQL)
- Designed and normalized a relational schema for a music platform (artists, albums, songs, playlists, users, ratings).
- Wrote 10 SQL queries to analyze genres, user activity, and popular content.

Data Analysis Projects (Python)
- Cleaned and transformed datasets (EU Cities, German Credit, Google Playstore Apps).
- Built visualizations to identify credit risk, app performance, and climate trends.

Bomb Lab – Reverse Engineering Challenge (C, Assembly | Tools: GDB, objdump)
- Reverse-engineered a compiled binary to trace memory, understand control flow, and decode logic.
- Successfully defused all phases while gaining experience in debugging and system-level execution.

Truth Table Generator – Logic Circuit Simulator (C)
- Developed a truth table simulator to evaluate AND, OR, NOT, XOR, Multiplexer, and Decoder gates.
- Implemented bitwise logic, file I/O, and dynamic evaluation of logical circuits.

CERTIFICATIONS
- JPMorgan Chase – Software Engineering Job Simulation
- Wells Fargo – Software Engineering Job Simulation
- Microsoft Security Essentials Professional Certificate
- Walmart USA – Advanced Software Engineering Job Simulation