

Ayush Munjial

+1 (908) 449-9850 | ayush.munjial@rutgers.edu | [LinkedIn](#) | [Github](#) | [Portfolio](#) | Santa Clara, CA 95051

EDUCATION

Rutgers University – New Brunswick, New Jersey, United States

September 2021 - May 2025

BS, Computer Science and Mathematics | GPA: 3.853/4.0 | Dean's List | Summa Cum Laude | Phi Beta Kappa | Alan Marc Schreiber Memorial Scholarship & Research Award

- **Relevant Coursework:** Data Structures, Algorithms, Discrete Math, Systems Programming, Software Methodology, Computer Architecture, Programming Languages, Databases, Linear Algebra, Graph Theory, Combinatorics, Optimization, Real Analysis, AI.

WORK EXPERIENCE

Undergraduate Peer Tutor - Rutgers Learning Centers

February 2023 - May 2025

- Conducted over 15 hours weekly tutoring sessions in Computer Science, Mathematics, and Physics, improving understanding and exam readiness for 25+ students. Utilized diverse teaching methods to enhance student performance by 20%.
- Acted as a role model and ambassador, mentoring 50+ students in developing effective study habits and overcoming academic challenges. Organized and led study workshops before major exams, increasing participation and boosting average test scores.

Android Developer Intern - Embitel Technologies, India

June 2024 - August 2024

- Developed a custom media player app using **Kotlin**, integrating **Media3 MediaSession** and **MediaBrowser** for advanced playback control and background functionality. Enhanced playback efficiency by 25%, significantly boosting user engagement and performance for automotive **OEM** applications.
- Implemented **AIDL** for secure login functionality, seamlessly integrating **Room** Database. Leveraged **Jetpack's** modern UI components, including **RecyclerView**, **Adapters**, and **Material 3** design principles, ensuring efficient data handling and state preservation, which reduced data retrieval time by 30% and maintained application consistency.

Assistant Data Analytics Intern - Fantasy Exports, India

May 2023 - August 2023

- Optimized **supply chain management**, elevating **inventory accuracy** to 95% and reducing weekly management time by 12 hours through strategic **ERP integration**, and improved operational efficiency by 20% through technical audits and process enhancements.
- Collaborated with warehouse and billing teams to digitize records, reconcile **supplier invoices**, and ensure accurate **product inflow/outflow** tracking.

PROJECTS

Fast Trajectory Replanning

February 2025 - March 2025

- Implemented and rigorously tested an intelligent agent using **Python** and **Pygame** to dynamically navigate and efficiently adapt to unknown obstacles in 101x101 grid environments by strategically applying and analyzing multiple adaptive **A*** search algorithms.
- Significantly reduced computational effort by over 50% through heuristic refinements and optimized tie-breaking mechanisms, enabling robust real-time path adjustments critical for applications in robotics navigation and interactive gaming.

Online Booking System

November 2024 - December 2024

- Designed a dynamic online railway reservation system utilizing **JSP**, **JDBC**, and **MySQL**, enabling real-time management of schedules, reservations, and cancellations across 100+ train routes with seamless database connectivity and advanced optimization.
- Enhanced user experience with dynamic station search functionality, automated fare calculation, and reservation notifications, achieving a 40% reduction in booking errors and successfully deploying the system on a scalable **Tomcat** server environment.

Command-Line C Shell

January 2024 - February 2024

- Created a custom command-line shell for **Linux** environments, supporting both interactive and batch modes. Incorporated key features like I/O redirection, pipeline operations, and child process management, achieving 99% command execution accuracy.
- Leveraged **POSIX** standards along with **dup2()** and **pipe()** for reliable I/O handling and process control. Enhanced the shell's functionality with efficient command parsing, directory operations, and a modular code structure, ensuring ideal user experience.

EXTRACURRICULARS

Rutgers University Mobile App Development Club

September 2023-December 2023

- Engineered a dynamic **Android-based Photos Album app** within a selective Rutgers cohort, implementing advanced serialization for 99% data persistence and enhancing search efficiency by 70% via custom tag-based retrieval algorithms.
- Spearheaded **UI/UX** design, creating responsive grid layouts and utilizing **Git** for agile collaboration and efficient version control, significantly improving user interaction and ensuring consistent application performance across diverse Android devices.

TECHNICAL SKILLS

- **Languages & Databases:** Java, Kotlin, Python, C, OCaml, JavaScript, TypeScript, SQL, HTML, CSS, MySQL, MongoDB
- **Frameworks & Libraries:** React, Node.js, Express.js, Jetpack Compose, Tailwind CSS, Vite, Framer Motion, REST APIs
- **Tools & Platforms:** Git, GitHub, Docker, Android Studio, IntelliJ, PyCharm, Eclipse, Gradle, Tomcat, AWS, GCP, Linux, macOS