

Jason Merchan

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EDUCATION

Rutgers University

Bachelor of Science in Computer Science, GPA: 3.7

Relevant Coursework: Data Structures & Algorithms, Systems Programming, Software Engineering

New Brunswick, NJ

Sep. 2022 – May 2026

PROFESSIONAL EXPERIENCE

Software Engineer Student-Worker

Mar. 2024 – Present

Enterprise Application Services at Rutgers University

New Brunswick, NJ

- Collaborated with cross-functional teams to optimize library database access for 120,000+ users by refining asynchronous operations and local API integrations, resulting in a 30% faster multi-campus data retrieval
- Enhanced myRutgers app security and user retention by implementing a cross-platform biometric authentication system, reducing account-related support tickets by 40% and increasing user login success rate by 25%
- Boosted overall app performance by 14% through designing and implementing an app-wide route navigation system, decreasing page load times by 50% and improving WebView responsiveness to 100%

Website Producer

Jun. 2021 – Aug. 2021

Urological Associates of Central Jersey

Edison, NJ

- Created a comprehensive clinic website, improving accessibility to Urological Associates of Central Jersey
- Amplified online visibility for Urological Associates by 75% through strategic implementation of SEO best practices, resulting in an increase in organic traffic and 30% more patient inquiries
- Achieved a 95% client satisfaction rate by translating complex urological feedback into user-friendly web content, leading to a 25% reduction in patient phone inquiries

PROJECTS

Layback Mobile App | *Flutter, Dart, Firebase, Docker*

Feb. 2024 – Present

- Spearheaded the development of a Flutter-based mobile application to enhance ease of beachside experiences, providing reservations and services using Flutter framework and Firebase BaaS
- Strengthened user authentication security by 40% through implementation of Google and Apple APIs for login protocols, while streamlining payments by integrating Stripe API
- Created and refined mobile interface and functionality based on design requirements and stakeholder's feedback

MyShell | *C, Makefile, Shell, Git*

Mar. 2024 – Apr. 2024

- Engineered a robust command-line shell from scratch, implementing interactive and batch modes capable of advanced parsing, wildcards, and conditional execution
- Created built-in shell commands (cd, pwd, which, exit) and implemented a custom program search algorithm to mimic standard shell behavior, as well as input/output redirection and piping between processes
- Reduced test time by 70% by engineering a comprehensive test suite with automated testing infrastructure using Makefile, increasing test coverage to 95%

Rutgers Rocket Propulsion Lab | *Python, C++, Altium*

Sep. 2022 – Feb. 2024

- Optimized data processing algorithms for RF-transmitted data, achieving a 19% improvement in speed and 4% in space efficiency, resulting in real-time telemetry analysis capabilities for rocket launches
- Facilitated cross-functional team meetings between telemetry and other subsystems, limiting integration issues
- Developed an intuitive GUI using Godot with C++ and GDScript, improving data visualization

Network Graph Simulator | *Java, Git*

Mar. 2023 – Apr. 2023

- Engineered a stochastic simulation processing networks up to 1 million nodes in under 30 seconds by using graph theory and randomization, enabling analysis of global social network impacts
- Optimized graph manipulation by leveraging advanced data structures, reducing query time by 40%, resulting in an increase in simulation speed for large-scale networks

TECHNICAL SKILLS

Frameworks/Libraries: React.js, Next.js, Flutter, Node.js, Express.js, Numpy, Pandas

Languages: Java, Python, Javascript, Typescript, Go, HTML/CSS, SQL, C, C++, Dart, Kotlin, Swift

Developer Tools: Git, Firebase, AWS, Appwrite, MySQL, Docker, XCode, Android Studio, Github, Vercel

Other Skills: Agile, RESTful API, Debugging, Multithreaded Programming, Object-Oriented Programming