

MARTIN RIVERA

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EDUCATION

Washington University in St. Louis | St. Louis, MO

May 2026

Bachelor of Science in Computer Science, Minor in Finance

- Relevant Coursework: Software Engineering for External Clients, Parallel & Concurrent Programming, Rapid Prototyping (JavaScript, Python, PHP, SQL, MySQL, React), Data Structures and Algorithms (Java), Video Game Programming (C#), Data Science (Python), Object-Oriented Programming (C++), Artificial Intelligence (Python), Capital Markets & Financial Management, Investments

Barack Obama Male Leadership Academy | Dallas, TX

May 2022

- Awards: Valedictorian, National Honor Society, National AP Scholar with Distinction, National Hispanic Recognition Scholar, Dartmouth Alumni Book Club Award, World Affairs Council of Dallas/Fort Worth's 20 Under 20, State Visual Arts Scholastic Event

SKILLS

- Programming Languages: Java, JavaScript, Typescript, Python, HTML, CSS, C++, C#, SQL, MySQL, PHP
- Software: Node.js, GitHub, React, Pandas, Unity, Eclipse, MongoDB, AWS, Apache, AVR Assembly, Arduino, Git
- Languages: Fluent in Spanish and English

WORK EXPERIENCE

Parkland Hospital | Dallas, TX

June 2025 – August 2025

Software Engineer

- Prototyped a React Native indoor navigation app in TypeScript for a Shark Tank-style pitch to hospital management, demonstrating a tech solution for patient navigation challenges
- Engineered GeoJSON mapping system converting CAD floor plans into coordinate-aligned digital maps with sub-meter accuracy
- Implemented A* pathfinding algorithms to calculate optimal routes between 15+ departments and POIs

Parkland Hospital | Dallas, TX

June 2025 – August 2025

IT & Financial Internal Auditor

- Audited 3,000+ Ethernet ports across hospital facilities, verifying network security and access compliance.
- Documented noncompliant ports and coordinated with IT to enforce security policy remediation.
- Analyzed cash management processes, tracking handling, transport, and reconciliation procedures.

Washington University McKelvey Engineering | St. Louis, MO

August 2023 – May 2025

Teaching Assistant Section Lead

- Led sessions for 6+ students, guiding them through Java projects in CSE131: Introduction to Computer Science
- Provided one-on-one support to 300+ students during office hours, improving assignment completion by 15%
- Promoted to Section Lead, overseeing 50+ teaching assistants to ensure compliance and efficiency

PROJECTS

Indoor Map App | REACT/TYPESCRIPT/MAPLIBRE PROJECT

June 2025 – August 2025

- Built cross-platform 3D indoor navigation with WebGL rendering and real-time GPS tracking
- Integrated 25-language translation system and accessibility features for diverse patient populations
- Developed custom pathfinding with wall-following algorithms and obstacle avoidance for complex indoor layouts

Incursion | UNITY/C# PROJECT

January 2025 – May 2025

- Developed a 2D platformer game in Unity with advanced player mechanics including double jump, sliding, sprinting, and stamina system
- Implemented comprehensive game systems: health management, object pooling, sound mixing, and score tracking with persistent data
- Built modular architecture with enemy AI, shooting mechanics, room generation, and configurable key bindings for enhanced gameplay

Pathfinding Visualizer | JAVASCRIPT/HTML/CSS PROJECT

December 2024 – January 2025

- Built an interactive tool to visualize pathfinding algorithms such as A* and BFS/DFS
- Designed an intuitive UI to allow users to customize obstacles
- Optimized rendering performance for real-time visualization of algorithm execution

Command Line Interface | C++ PROJECT

April 2024 – May 2024

- Designed a Unix-like CLI with support for file system operations such as creating, deleting, and navigating directories
- Implemented command parsing, argument handling, and error management for a smooth user experience
- Developed a modular architecture to facilitate the addition of new commands and features