

# John Parrott

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## Summary

Junior backend developer with experience building production-style systems, REST APIs, and data-driven platforms using Java, C++, Python, PostgreSQL, and Docker. Delivered full-stack and backend projects focused on authentication, resource optimization, and scalable service architecture. Strong foundation in OOP, algorithms, and distributed systems fundamentals.

## Education

**University of South Florida (USF) Tampa, FL**

**May 2025**

*Bachelor of Science, Computer Science*

**Honors:** USF Directors Scholarship, Florida Bright Futures Scholarship, Schnabel-Sparacio Scholarship

## Technical Skills

**Backend & Systems:** HTTP/REST Architecture, Authentication & Authorization, API Design, Docker, Postman

**Programming Languages:** Java, C++, Python, JavaScript, TypeScript, C, SQL, C#

**Frameworks & Libraries:** Micronaut, Node.js, React, Next.js, Unreal Engine 5

**Databases & Data:** PostgreSQL, SQL schema design, Data Modeling, CSV processing & automation

**Tools & Dev Practices:** Git, Docker, Agile/Scrum, Windows Forms, DataGridView, Linux/WSL, VS Code, IntelliJ

**Computer Science & Architecture:** OOP, Data Structures & Algorithms, Operating Systems, Computer Architecture

## Project Experience

**[PathOptimize](#) - Hospital Equipment Optimization System** (*Electron, Node.js, React, Python*) **Jan 2025 – May 2025**

- Designed and implemented core algorithms to analyze equipment location history and generate data-driven recommendations for reducing travel distance and improving resource allocation within the hospital
- Developed logic to identify optimal storage locations for mobile equipment based on usage frequency, travel paths, and proximity to high-demand areas, enabling hospitals to reduce operational inefficiencies
- Produced usage insights including most-used devices, most commonly accessed rooms, and daily utilization ratios, helping administrators prioritize purchasing and staffing decisions

**[Student Management System](#)** (*Java, TypeScript, Micronaut, PostgreSQL, React, AG Grid*) **Aug 2024 – Dec 2024**

- Developed a full-stack web application for managing student registration, schedules, and academic progress using Micronaut, React, and PostgreSQL
- Implemented a role-based authentication system to manage access for students, instructors, advisors, staff, and administrators, ensuring appropriate permissions and functionality for each user type
- Built an advisor dashboard to manage student enrollments and track degree progress, along with an instructor dashboard that allows instructors to view their assigned courses and students
- Created staff and administrator tools for managing courses, departments, and user accounts

**[Docoppolis Web Server](#) - C# Custom HTTP Server** (*.NET, HttpListener API, HTML/CSS/JS*) **Sept 2025 – Oct 2025**

- Built a lightweight, modular HTTP web server in C# using HttpListener, handling routing, session management, and authentication
- Implemented a custom router supporting GET, POST, and PUT methods with role-based authorization and CSRF validation
- Created reusable abstractions (ResponsePacket, Router, SessionManager) for clean separation of concerns and extensibility
- Adapted architectural principles from the CodeProject tutorial *Writing a Web Server from Scratch*, restructured for improved modularity and maintainability

## Work Experience

**The Fountains at Lake Point Woods**

**April 2020 - Oct 2022**

*Server*

- Collaborated with kitchen staff to manage diet of elderly residents, improving their health and overall well-being
- Conducted training programs for new employees, providing them with the skills to effectively interact with residents, provide meals accurately, and assist with various needs, ultimately enhancing resident satisfaction