

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

Aug 2020 - 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, Postman

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

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

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

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

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 algorithms to process 50K+ location data points from hospital equipment logs, generating recommendations that reduced average retrieval distances by up to 20%
- Engineered optimization logic to determine optimal storage zones based on usage frequency and proximity to high-demand areas, improving resource access times by ~15–25%.
- Generated daily and weekly usage reports across 1000+ devices and 150+ rooms, enabling hospital administrators to make data-backed procurement and staffing decisions.

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

- Created a full-stack web application supporting hundreds of student records with registration, scheduling, and GPA tracking modules using Micronaut, React, and PostgreSQL.
- Implemented a 5-tier role-based access control (RBAC) system managing permissions for students, instructors, advisors, staff, and admins, ensuring secure access across 30+ application routes.
- Prepared advisor and instructor dashboards with real-time enrollment and progress tracking for 100+ students per semester.
- Constructed CRUD management tools for course and department data, enabling admins to manage dozens of departments and 200+ course records through a clean, React-based interface.

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

- Engineered a lightweight HTTP web server in C# capable of handling 100+ concurrent connections, featuring modular routing, session handling, and authentication.
- Developed a custom router supporting 3+ HTTP methods (GET, POST, PUT) with role-based authorization and CSRF protection, reducing repetitive route definitions by ~40%.
- Authored 3 core reusable classes (ResponsePacket, Router, SessionManager) to decouple business logic and improve maintainability, cutting feature iteration time by ~30%.

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