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, 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 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.

Docoppolis 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