Joseph L. Rhodes V

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EDUCATION

Case Western Reserve University, School of Engineering - Cleveland, OH

May 2025

Bachelor of Science in Computer Science, Finance

Minors: Mathematics & Business Management Cumulative GPA: 3.6/4.00

Study Abroad, Manchester, UK

Jan 2024 - Jun 2024

University of Manchester

• Collaborated with an international cohort on team-based projects, strengthening cross-cultural communication, global perspective, and adaptability in diverse team environments.

COURSEWORK

Computer Science: Full Stack, AI, Databases, Programming Language Concepts, iOS App Development, Computer Security, OS, Distributed Systems, Data Science, Visual Computing.

Business: Cases, Corporate Finance, Accounting, Economics, Marketing, Investment Analysis, Fintech, M&A, Empirical Analysis, Financial Modeling.

SKILLS

Programming Languages & Libraries: Java, Python, JavaScript, React.js, THREE.js, Node.js, SQL, HTML, CSS.

Technology: AWS, Microsoft Office Suite, MongoDB, PostgreSQL, Power BI.

Other Activities: Actor, Dance, Runner, Soccer, Saxophone, Personal Fitness, Photography, Pickleball, Golf.

EXPERIENCE

Full Stack Intern | West Kirby Warriors | Liverpool, UK

Jan 2025 - Present

- Launching a dynamic, user-friendly website using React.js, HTML, and CSS, featuring real-time registrations and a contact form, which contribute to a 15+ player increase in club membership.
- Tailoring a PostgreSQL relational database schema to manage players, stats, and profile image data while adhering to BCNF principles to ensure data consistency and scalability.
- Incorporating a Node.js server to retrieve player images from AWS S3 and player data from PostgreSQL, enabling scalable image and data management. Deploying frontend via Vercel and backend via Render.

Undergraduate Research Assistant | Case Western Reserve University | Cleveland, OH

May 2024 - Aug 2024

- Implemented Python scripts to extract and analyze network traffic data by processing PCAP files with the Scapy library, focusing on the goal of enhancing security and safety monitoring of IoT devices.
- Engineered data processing pipelines to structure metadata and raw data and enable classification and state detection of the IoT devices.
- Utilized embedding techniques using the Ollama model to create vector representation of network traffic data, facilitating machine learning and advanced analytics.

Applied Software Engineering Experience | React, Python, Node.js, PostgreSQL

Aug 2023 - Dec 2023

- Engineered a full-stack web application to simplify trip planning and sharing, with a primary focus on front-end development, integrating itinerary management, flight/hotel searches, and a social media module, reducing planning stress for users.
- Architected and deployed RESTful APIs for secure client-server communication, backed by a PostgreSQL database, enabling real-time updates and efficient data storage.
- Followed Agile methodologies, progressing through the software requirement specifications (SRS), design document, implementation, and testing to deliver a deployed application with Heroku.

PROJECTS

AWS Game Builder Hackathon | TypeScript, HTML, CSS, React, AWS

Dec 2024 - Jan 2025

- Created a game version of the dual n-back exercise featuring dynamic audio-visual matching, real-time scoring, adjustable difficulty, and immediate feedback to help improve working memory in individuals with ADHD.
- Integrated Amazon DynamoDB with custom APIs to handle secure user sign-up/sign-in and analytics, leveraged React hooks for state management, and deployed the application via AWS Amplify for seamless CI/CD.

Healthcare Messaging System | Python

Mar 2024

- Built a custom server capable of acknowledging client connections, receiving messages, handling disconnects, and maintaining a count of connected clients.
- Developed a comprehensive chat system protocol encompassing functionalities such as client registration, messaging, direct messaging, and handling of invalid commands and close connection requests.

LEADERSHIP & HONORS

Varsity Football | Leadership Group | Case Western Reserve University

Aug 2021 - Dec 2024

• 1 of 6 players in school history to be a 4-time PAC All-Conference award recipient.