Nithin Raghava Aitha (he/him/his)

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EDUCATION

The George Washington University (GWU) Aug 2023 – May 2025
Master's degree in Computer Science, ***SEAS Dean's Scholarship Award*** Washington, DC
- **Coursework:** Data Structures and Algorithm Design, Cloud Computing, Database Management Systems, Object-Oriented Design, Software Engineering, Software Paradigms, Computer Architecture, Big Data & Analytics, Machine Learning.

BV Raju Institute of Technology (BVRIT) Aug 2019 – May 2023
Bachelor's degree in Computer Science Engineering Hyderabad, India
- **Coursework:** Formal Languages and Automata Theory, Web Technologies, Computer Networks, Design Patterns.

TECHNICAL SKILLS

Languages: Python, C#, Java 8+, C++, C JavaScript, TypeScript, HTML5, CSS3, SQL, R
Frameworks: jQuery, EJS, React.js, Node.js, Express.js, Django, Spring Boot, .NET, Bootstrap, Tailwind
Databases: MySQL, NoSQL, Oracle Database, PostgreSQL, Redis **| Operating Systems:** macOS, Linux, Windows
Tools and Technologies: AWS services(EC2, IAM, S3, VPC), PyCharm, Git, GitHub, Postman, Chrome Dev Tools, npm, Swagger, Docker, Jira, FreshDesk, Slack, Visual Studio, Eclipse, IntelliJ

WORK EXPERIENCE

Software Engineer (Technical Support) | GWU Law Library, GWU, DC July 2024 – May 2025
- Improved PostgreSQL query speed by 40% through smart indexing and Redis caching for faster data-intensive workflows.
- Automated CI/CD pipelines via Docker and GitHub Actions, reducing deployment errors by 50% across all release cycles.
- Boosted React and Redux UI performance by 50% using optimized rendering, enhancing interface speed and responsiveness.
- Integrated PostgreSQL with Node.js RESTful APIs, scaling backend architecture and cutting query latency by over 30% total.
- Deployed Dockerized pipelines with Agile GitHub workflows, increasing release stability and reducing failures system-wide.

Full Stack Developer Intern | Technovert Solutions, India Aug 2022 – Mar 2023
- Built responsive UI components using React.js and Spring Boot, improving frontend rendering speed by 45% across pages.
- Developed RESTful APIs with Node.js and Express.js, ensuring 99% uptime and stable data flow across client-server calls.
- Optimized PostgreSQL queries and procedures, reducing response latency by 25% and improving database performance.
- Automated deployments using GitHub Actions in Agile cycles, improving release consistency and reducing manual overhead.

PROJECTS

Write Up | JavaScript, node.js, express.js, PostgreSQL
- Created a modular blog application using Node.js, EJS views, and MongoDB, implementing RESTful routing, responsive UI design, and secure session handling to ensure consistent user experience and functional accessibility across devices.
- Built a modular blog platform with Node.js, Express.js, and EJS, applied MVC patterns for clean backend design.
- Implemented a PostgreSQL database for efficient blog content storage and retrieval, enhancing performance and scalability.

Java System Simulator | Java, OOP, Design Patterns (Factory, Singleton), Micro Systems
- Developed a modular computer system in Java 11 simulating CPU instruction cycles, memory-register state changes, and CLI-driven user operations using object-oriented design and custom instruction parsing logic for execution accuracy.
- Used Singleton and Factory patterns to modularize CPU logic, improving testability, debugging flow, and opcode extensibility.
- Designed and debugged a full execution pipeline, gaining low-level control experience with data flow and process handling.

Lost/Found | JavaScript, react.js, node.js, express.js, PostgreSQL
- Developed a React-based web app with PostgreSQL backend for campus users; implemented secure user authentication, admin dashboard features, and dynamic tables with real-time filtering for efficient item tracking and retrieval workflows.
- Built using JavaScript, React.js, Node.js, Express.js, PostgreSQL, HTML, CSS, and Bootstrap, ensuring secure access via college ID registration and providing a reliable, user-friendly platform for managing lost and found items.
- Designed two main sections: Lost and Found, allowing students to report found items and check the database for matches, facilitating email-based coordination for item returns and ensuring a streamlined, efficient recovery process.

Task Tracker | Angular, ASP.NET Core, Postgre SQL, Entity Framework
- Developed a responsive task management application using Angular 16+ and TypeScript for the frontend, integrated with an ASP.NET Core Web API backend utilizing Singleton and Repository patterns for structured data handling and maintainability.
- Designed scalable task UI with Angular and .NET backend, aligning state logic with real-time interaction for smoother UX.
- Engineered backend services with Entity Framework Core and PostgreSQL, implementing robust RESTful APIs to handle CRUD operations efficiently, enhancing database performance and ensuring reliable data persistence.
- Created Angular-based UI with responsive panels and Redux-like state logic to mirror real-time task feedback loops.