Navya Alam

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PROFESSIONAL SUMMARY

- Experienced Software Engineer with over **4** years of experience specializing in **Python** and **React.js** technologies and Object-Oriented Analysis and Design (**OOAD**), adept across all stages of the Software Development Life Cycle (SDLC).
- Proficient in **Python backend development**, building scalable enterprise applications using **Spring Boot, Spring MVC**, skilled in creating and maintaining web services like **REST APIs** for efficient data integration and exchange
- Front-end experience with command over **React.js** and **Angular**, associated technologies for state management, and proficient in **HTML5, CSS3,** and **TypeScript** to develop responsive, interactive user interfaces
- Strong exposure to Data Structures, Algorithms and Design Principles, with a solid background in cloud technologies like **AWS**, **Azure**
- Proven ability in DevOps practices, including **CI/CD** workflows, and expertise in containerization and orchestration technologies such as **Docker** and **Kubernetes**
- Specialized in database management, skilled in both **SQL** and **NoSQL** databases, with a focus on efficient data handling and storage
- Committed to delivering high-quality code and collaborating effectively within cross-functional teams to achieve project objectives, incorporating **TDD** (Test-Driven Development) and **BDD** (Behavior-Driven Development) methodologiess

EDUCATION

University of North Carolina at Charlotte (UNCC)   **Aug 2022 – Dec 2023**

Master of Science in Computer Science   GPA: **4.0/4.0**

Courses: Data Structures & Algorithms, Software System Design Implementation, Database Systems, Cloud Computing

TECHNICAL SKILLS

Programming Languages:	Java, Python, JavaScript, TypeScript, HTML5, CSS3, C++, SQL
Frontend:	React, Angular, Redux, jQuery, Ajax, XML, HTML5, Bootstrap, Tailwind CSS, Next.js, Vue.js
Backend:	Flask, Django, Node.js, Express.js, RESTful API, Hibernate, Spring Boot
Databases:	AWS S3, Amazon DynamoDB, Amazon RDS, PostgreSQL, MySQL, MongoDB
Cloud Services:	AWS EC2, AWS Lambda, AWS Elastic Beanstalk
Miscellaneous:	Docker, Kubernetes, Maven, Jenkins, Apache Kafka, JUnit, Git, Jest, Postman, VS Code, IntelliJ

WORK EXPERIENCE

Dell Technologies, NC, USA   **Jan 2024 – Present**
Software Engineer

- Developed the Customer Order Management module for managing customer orders using **React.js** and React **Redux**, enhancing state management and user interactions for balance checks, transaction reviews, and account modifications.
- Managed immutable data structures in React.js apps with tools like **Redux** Toolkit, enabling efficient state management and data integrity in complex financial procedures and transactions. Produced a library of reusable React components, which enhanced UI consistency and cut down on development time by 20%.
- Optimized the Customer Support module's backend services using **Python Flask**, efficiently handling daily customer interactions through updated **REST APIs.**
- Enhanced the module by implementing **SQLAlchemy** with **PostgreSQL** and integrating **Redis** caching, which resulted in a **35%** improvement in query response times for customer inquiries and support tickets.
- Designed and optimized database schemas and queries for **PostgreSQL** and **MongoDB** to support high-volume data processing, enhancing data handling efficiency and scalability by **40%.**
- Improved security measures by adopting Spring Security and carried out thorough testing of the modules using **pytest.**
- Worked with cross-functional teams to create **Docker** files for scalable deployment and used **Jenkins** for effective continuous integration and delivery (**CI/CD**), leading to a **20%** decrease in deployment times.

University of North Carolina at Charlotte, US   **Jan 2023 – Dec 2023**
Graduate Teaching Assistant

- Mentored students in the development of diverse Network-Based Applications using **Node.js** and **React**, providing hands-on support in debugging, problem-solving, complexity analysis and issue resolution.
- Facilitated project selection and refinement, knowledge-sharing, offering expertise in transitioning applications to **Next.js** for enhanced efficiency, performance, and streamlined development workflows.
- Applied a variety of design patterns in project development, showcasing proficiency in creating scalable and maintainable software solutions.

Accenture, India   **July 2021 – Aug 2022**
Application Development Analyst

- Optimized front-end components for an Enterprise Agreement Management Portal website using **React.js**, implemented lazy loading with React Lazy, streamlined state and lifecycle management with React Hooks, reducing application load time by **25%.**
- Utilized React Portals for integration of **micro-frontend components** such as pop-up modals for agreement details, tracking and management, enhancing UI without disrupting the DOM structure.
- Integrated React **Redux** for state management across components, enhancing code maintainability and debugging efficiency, and facilitating faster feature updates and issue resolutions.
- Redesigned backend services using **Python Flask**, developing **RESTful APIs** for vehicle listings, user authentication, and transactions, improving performance and stability during peak traffic periods.
- Performed upgrades and optimizations on the existing **SQL database**, enhancing schema configurations and indexing, which resulted in reduced query response times by **30%.**
- Implemented **SQLAlchemy** for optimized object-relational mapping, significantly streamlining data transaction processes. Optimized data retrieval speeds by implementing **Redis** Caching, which resulted in a **40%** improvement in response time
- Enhanced application security by implementing **JWT** with **Flask-Security**, optimizing user authentication and authorization. Conducted comprehensive testing of backend and frontend modules with **pytest** and **Jest.**
- Worked closely with the DevOps team to create **Docker** files for scalable deployment and utilized **Jenkins** for efficient continuous integration and delivery **CI/CD.**
- Utilized **AWS S3** for secure storage of vehicle images and transaction records, and **AWS RDS** to enhance performance and reliability in inventory searches and transaction history functionalities.
- Led and gave knowledge transfer sessions to 5 junior developers about **DSDM**-Agile environment and contributed to product backlog grooming, estimation, sprint planning, **code review**, sprint demos, and retrospection.

Trigent, India   **Jan 2019 – Jun 2021**
Software Engineer

- Developed and maintained full-stack e-commerce application using **Python**, **Django**, and **SQLAlchemy**, creating high-performance solutions with **RESTful APIs** for optimized database interactions.
- Implemented security measures using Flask Security, **OAuth 2.0** and **JWT** to protect sensitive data and user interactions, while optimizing data access and management with **SQLAlchemy** and Hibernate to enhance database performance by **30%.**
- Enhanced user interfaces by implementing **AngularJS** in front-end development, significantly improving user engagement and satisfaction by **25%** through responsive design.
- Improved website responsiveness by maintaining structured **HTML**, **CSS**, and **JavaScript** code, reducing load times. Complemented this by transitioning to HTML5 and SASS for more efficient styling and layout management and adopting TypeScript to ensure stronger type-checking and fewer runtime errors.
- Created reusable components using **React.js** for port operations, integrating **React Router** for seamless navigation and consistent state management, and incorporating **lazy loading** to enhance performance and responsiveness.
- Collaborated with diverse teams to gather requirements, plan sprints, conduct code reviews, and deliver features on schedule.
- Developed **pytest** and **unittest** test suites to bolster code reliability and maintainability, resulting in a **15%** decrease in system bugs and a **10%** increase in response time for critical modules, thus cultivating a more stable application environment.
- Utilized **Prometheus** and **Grafana** for real-time monitoring and alerting of web applications, along with an **Elasticsearch based logging system**, enhancing application performance, and reducing downtime.

ACADEMIC PROJECTS

E-Payment Microservices System

- Developed an e-wallet platform using **Python** and **Flask**, segmenting key features into microservices for user profiles, transactions, and notifications, enhancing data flow with **Apache Kafka** and retrieval speeds with **Redis**, while securing access via Flask Security and OAuth2, all containerized with **Docker** for streamlined deployment.

FastAPI Social Media Platform with CI/CD & Security Enhancements

- Architected and delivered a social media application utilizing **FastAPI**, facilitating user interactions, content creation, and secure authentication. Mastered advanced features like JWT authentication, database relationships, and API testing via pytest.
- Incorporated **OAuth** for heightened security, ensuring users a seamless and secure experience. Leveraged PostgreSQL in conjunction with **SQLAlchemy** for high-performance database operations. Employed Docker for
- streamlined deployments on AWS EC2, achieving a 40% bug reduction. Strengthened application security employing SSL/HTTPS, **UFWfirewall**, and nginx. Implemented a robust CI/CD pipeline with GitHub Actions, ensuring timely and safe updates to the

CERTIFICATIONS

- AWS Developer Associate
- Programming, Data Structures and Algorithms in Python