**Bhuvana K**

**Contact: -+1 (773) 770 - 5889**

**Email: - kbhu93@gmail.com**

**PROFESSIONAL SUMMARY:**

* Over 8 years of experience as a Full Stack Developer in the IT industry. Extensively experienced in Software Analysis, Design, Development, Implementation, Testing, and documentation of professional web-based applications using **HTML5, CSS, JavaScript, Typescript, jQuery, Node.JS, React, Angular 14, ASP.Net, C#, Java, Spring Framework, Spring Boot and Python.**
* Creating Single Page Web applications with either **React** or **Angular** as the front-end frameworks.
* Experienced in working with Redux architecture using complex Object-Oriented concepts to improve the performance of the websites.
* Experience in using React components, **Forms, Hooks, Keys, Router, Redux, HOC, Context API, Animations, and Flux concepts.**
* Implement state management techniques using tools like **NgRx, Behavior Subject and RxJS,** along with Servicesto handle complex application states.
* Expertized in creating Templates, Reactive forms, form validation and node module management in latest Angular framework.
* Expertise in utilizing Angular **Directives, Controllers, Filters, Services, Templates, Events and Injectors**
* Expertise in Middleware’s setup like **Redux Thunk, Redux-Saga, and Redux-Promise** in applications to retrieve data from Back-End and to perform RESTFUL services.
* Strong experience with **Java Spring Boot, Python (Flask/Django), ASP.Net, and Node.js**, building robust and scalable server-side applications.
* Expertise working with different Spring framework modules like Spring Core, Spring AOP, Spring MVC, Spring Batch, Spring Security and Spring Boot.
* Built RESTful APIs and Web APIs using **ASP.Net Web API, Spring Boot, Express JS, Nest JS, and Python** enabling seamless communications.
* Secured authentication & authorization with **JWT, OKTA, SAML, OAuth 2.0, ASP.Net, bcrypt, and Django Authentication.**
* Implemented asynchronous programming with Promises & Async/Await, ensuring non-blocking operations using NodeJS and improved system responsiveness.
* Experience with Core Java, including multithreading, concurrency file handling, I/O, generics, data structures and collections, and garbage collection.
* Experienced in using **Java Spring JPA** with Hibernate to integrate **H2, MySQL, SQL Server, AWS RDS**, and **Oracle** into back-end web applications and performing CRUD and aggregation operations on the database.
* Experienced in database programming using **Oracle, and MySQL,** and proficiency in developing SQL in JDBC as well as client-server environments.
* Developed multi-tier applications with clean architecture, ensuring modularity and maintainability.
* Experience with **Azure and AWS (EC2, Lambda, ELB, ECS, S3, CloudWatch**) to deploy the application on the cloud and manage the session.
* Strong background in unit testing, integration testing, and end-to-end testing using tools like **Jest, Mocha, Cypress, JUnit, and Selenium.**
* Complete understanding of the DevOps process with continuous integration using **Jenkins, Docker, AWS code-Build and code-Pipeline, EKS.**
* Experience working on **SOAPUI, Fiddler, Postman, SendGrid and Contentful tool.**
* Good experience in using various version controls like **GitHub, Bit Bucket, and GIT.**
* Experience in using bug/issue tracking, project Tracking, and Management tool **JIRA and Kanban board.**
* Involved in all stages of the Software Development Life Cycle (SDLC) as well as working in **AGILE Methodologies**-based development environment, participating in sprint/iterations and SCRUM meetings.
* Proficient in planning, problem-solving, and communication ability to operate both individually and in cross-functional teams.
* Experience in code refactoring, design patterns, and performance optimization to enhance application efficiency.
* Passion for learning new technologies, staying updated with industry trends, and mentoring junior developers.

**Technical Qualifications:**

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| **Skills** | **Description** |
| Operating Systems | Windows and Linux |
| Web Technologies | HTML5, CSS3, SASS, AJAX, NGRX, RxJS jQuery, JSON, Angular 14, NodeJS, Next JS, ReactJS, Express JS, Redux, Redux-Saga, Redux-Thunk, XML, JavaScript, TypeScript, Material-UI, MEAN Stack and MERN stack. |
| Security Libraries | JWT, X-CSRF, Okta, Saml, OAuth 2.0, ASP.Net, bcrypt, and Django Authentication. |
| Backend Technologies | Java, JDBC, JSP, Spring framework, Spring Boot, Node JS, Express JS, ASP.Net, C#, and Python |
| Cloud Technologies | Azure Cloud Services, AWS (EC2, Lambda, ELB, ECS, S3, CloudWatch) |
| Databases | SQL Server, MySQL, MongoDB, Redis, PostgreSQL and AWS S3 |
| IDE’s | Visual Studio Code, Visual Studio, IntelliJ, and Eclipse. |
| Web Servers | NodeJS, HTTP Web Server, Apache Tomcat |
| Testing & Integration tools | JIRA, JUnit, Jest, Protractor, Karma, Mockito, Jenkins, Mocha, Cypress, Enzyme, Webpack and Selenium. |
| Source management tools | GitHub, Bitbucket, Git |

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| **Client: CareFirst FEPOC – Reston, VA** | **Jun 2024 – Till Date** |
| **Role: Senior Full-Stack Developer** |  |

The Real-time Electronic Health Record (EHR) is a Dashboard that allows healthcare providers, administrators, and patients to manage medical data securely and efficiently in a real-time environment. This Dashboard centralizes and streamlines patient medical records, such as diagnoses, treatments, prescriptions, and lab results, while enabling secure and real-time communication among healthcare professionals.

**Responsibilities:**

* Developed a responsive and user-friendly UI with React.js and Next.js, providing a seamless experience for healthcare professionals and patients.
* Implemented state management with Redux Toolkit & Context API, ensuring efficient handling of complex data.
* Developed a scalable UI using React, implementing advanced Hooks, Context API, and performance optimization techniques.
* Integrated modern state management solutions like Redux Toolkit, Flux, and Context API, ensuring efficient data flow.
* Built reusable components following best practices for modular and maintainable code in React.
* Implemented UI styling with CSS-in-JS, Tailwind CSS, and Sass, improving maintainability and responsiveness.
* Built dynamic dashboards using Recharts and React Query, enabling real-time analytics on patient records.
* Optimized performance with lazy loading, code splitting, and memorization, improving page load speed.
* Ensured secure API communication using Axios with proper authentication and error-handling mechanisms.
* Designed and developed RESTful APIs using Node.js for handling patient records, medical history, and real-time updates.
* Implemented real-time communication using WebSocket to facilitate instant updates between healthcare providers.
* Optimized database performance with MongoDB and PostgreSQL, improving query execution speed.
* Enhanced security measures by integrating JWT authentication, OAuth 2.0, and role-based access control for HIPAA compliance.
* Improved API response time by integrating Redis caching, reducing load times for frequently accessed data.
* Developed automated test suites using Jest, Mocha, Cypress, and Enzyme, achieving high test coverage and reliability.
* Deployed and managed the backend on AWS (EC2, S3, RDS), ensuring scalability and high availability.
* Containerized the application using Docker, enabling easy deployment and scaling.
* Set up CI/CD pipelines using GitHub Actions, automating build, test, and deployment processes.
* Optimized build process using Webpack for efficient bundling and reduced load times.

**Environment:** CSS3, HTML5, NodeJS, React, JavaScript, TypeScript, NextJS, Redux, flux, context API, React Saga, Axios, Hooks, MongoDB, Redis, Node.js, Spring Boot, OAuth2, WebSocket, Jest, SOAP, Hibernate, Junit, Cypress, Docker, EC2 instances, RDS, S3, ELB.

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| **Client: Amalgamated Bank – New York, NY** | **Feb 2023 – May 2024** |
| **Role: Full-Stack Developer** |  |

**Description:**

The goal was to create a seamless and user-friendly interface that allows customers to easily apply for loans, track the progress of their applications, and receive real-time updates on key information such as application status, interest rates, and payment schedules.

**Responsibilities:**

* Worked on development of User Interface using HTML/HTML5, CSS/CSS3, JavaScript, Typescript 2.3, AJAX, JSON, Angular and RxJS.
* Built a responsive and intuitive UI using Angular 14, making the loan application process simple and engaging for users.
* Used Ng-Model to create two-way data bindings for reading and writing input-control values.
* Implemented dynamic form validation to guide users through the application process, reducing errors and improving user experience.
* Developed reusable Angular components and modules, ensuring a modular and maintainable codebase.
* Integrated real-time updates using WebSocket and RxJS, providing users with instant feedback on their application progress.
* Designed interactive dashboards with charts and visualizations, allowing users to track loan status, interest rates, and payment schedules effortlessly.
* Optimized frontend performance by lazy-loading modules and optimizing API calls, ensuring a smooth and fast experience.
* Engineered a scalable and secure backend using ASP.Net and C#, ensuring reliable performance and seamless data handling.
* Utilize new concept of PIPE’s and routing guards in this application and involved in the production support and used NgRx storage to store the observable data using objects. Used observables and subscriptions.
* Implemented services for component communications to achieve dependency injection (DI).
* Designed and developed RESTful APIs to enable smooth communication between the frontend and backend, ensuring fast and efficient data retrieval.
* Implemented authentication and authorization mechanisms using JWT and OAuth, securing user data and financial transactions.
* Optimized database queries and performance using Entity Framework and SQL Server, reducing response times and improving system efficiency.
* Developed a robust loan eligibility engine that automates decision-making based on user-provided data and predefined business rules.
* Integrated third-party financial services and APIs, enabling seamless connectivity with credit bureaus and payment gateways.
* Ensured high availability and reliability by implementing caching mechanisms and optimizing API response times.
* Involved in working with the QA to assist in writing test code and debugging the defects in the application.

**Environment:** Agile, HTML, CSS, TypeScript, jQuery, AJAX and Angular 14, XML, JSTL JSP, ASP.Net, C#, OAuth, JDBC, RESTful Web services, JWT, Jenkins, SQL, JIRA, SVN, GIT.

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| **Client: Tata Consultancy Services – Hyderabad, India** | **Jul 2020 – Dec 2021** |
| **Role: Full-Stack Developer** |  |

**Description:**

To assist users in locating accessible structures within a designated area, this project will provide an interactive graphical user interface. Using Google Maps API, the application displays accessible features on a map. Real-time insights into the accessibility resources' availability in various areas are provided by the project's

integration of data from multiple external sources, which is scraped and shown on a dashboard table. This interface makes it easier for users to find and evaluate accessibility choices.

**Responsibilities:**

* Used ReactJS for Templating to develop faster compilation and reusable components.
* Enhanced the React Observables with Redux, React-router, and Redux-thunk.
* Used Redux-Thunk as middleware to manipulate the data type and handle multiple actions.
* Developed user interface by using the React Higher Order Component, Flux/Redux for SPA development.
* Used Axios with Restful web Services to integrate server side to client side.
* Added new features using React or Redux for the functionality of a few modes.
* Implemented Global State Management with React-Redux, React-Hooks, JavaScript, HTML5, and CSS3.
* Implement React Context API to pass and manipulate data around various components.
* Implemented view partly by ES6 with React framework, designed web pages by React-Bootstrap, SCSS, and controlled the state of the application by using Redux.
* Developed a single-page application using React Async Await, Next JS, and GraphQL.
* Worked on updating, accessing, and version controlling the code using GitLab and creating a new baseline for updated code as a daily activity.
* Developed the backend using Python and Flask/Django, ensuring efficient API handling and smooth data processing.
* Integrated the Google Maps API to fetch and display geospatial data, providing users with accurate accessibility information.
* Designed and built a RESTful API to serve accessibility data to the front end, ensuring seamless interaction with the UI.
* Processed and cleaned data using Pandas and NumPy, ensuring accurate and relevant information is displayed on the dashboard.
* Implemented a database using PostgreSQL/MySQL to store and manage accessibility-related data for faster lookups.
* Worked with Jest test framework for testing React components.
* Used JIRA for project tracking and team communication.
* For Continuous Integration and Continuous Deployment, I used Jenkins.
* Worked on an Agile Development Team to deliver regular updates to the business team and project managers.

**Environment:** React native, Babel, Jira, Jenkins, Jest, Cypress, GitHub, NPM, webpack, VS Code, NodeJS, React, Hooks, Context API, React Observables, redux, Axios, ES6, React HOC, JavaScript, HTML5, CSS, styled component, JSX, SCSS, Bootstrap, Redux-thunk, React Router, Python, NumPy, MySQL, Flask, Restful Services, Agile.

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| **Client: Xilinx – Hyderabad, India** | **May 2017 – Jun 2020** |
| **Role: Full-Stack Developer** |  |

**Description:**

This project involves creating a dashboard that enables users to monitor and control the performance of Field Programmable Gate Arrays (FGPA) devices in real time. This dashboard could also allow users to perform certain control operations, such as initiating reconfiguration, adjusting parameters, and triggering certain actions on the FPGA hardware.

**Responsibilities:**

* Responsible for creating web-based applications using React JS, Node.js, and Angular workflow.
* Built single-page application with modules, reusable components, and forms using React JS and Angular.
* Developed responsive applications using Bootstrap to optimize both mobile and desktop resolutions.
* Experience in implementing cross-browser style sheets and using React UI components like Grid and Flexbox.
* Used Webpack, Babel, and NodeJS as dependencies for the application.
* Experience in working with NoSQL databases like MongoDB to optimize the database.
* Eclipse is used as an IDE tool to write and debug application code.
* Spring Boot was responsible for handling business logic, managing WebSocket connections, and interfacing with the FPGA hardware.
* Back-end coding and development using Java Collections including Set, List, Map, Multithreading, Servlet, and Exception Handling.
* Used various Core Java concepts such as Exception Handling and collection APIs to implement various features and enhancements.
* Integrating spring injections for DAOs to achieve Inversion of Control, updating Spring Configurations for managing Java objects using callbacks.
* Configured Spring Security in the application to secure the method calls and RESTFUL web services.
* Implement WebSocket for real-time updates of simulation status and logs.
* Worked on Transaction Interface in Hibernate which maintains abstraction from the transaction implementation.
* Used JavaScript library Jest for the unit testing.
* Used Jenkins continuous Integration server to run automated test suits.
* Done the design, and development testing phases of Software Development using AGILE methodology and Test-Driven Development (TDD).

**Environment:** React JS, Node.js, Angular, Redux, Bootstrap, MongoDB, Eclipse, java, WebSocket, Spring Boot, Hibernate, Jest, Jenkins, Agile and TDD.

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| **Client: Tech Mahindra – Chennai, India** | **Jan 2015 - Apr 2017** |
| **Role: Software Engineer** |  |

**Description:**

The Engineering Order Dashboard is a customer-facing migration application designed to streamline the creation of product requests and future-dated orders. This tool enables clients to easily submit new orders and schedule them for future delivery, enhancing the order management process. With an intuitive interface, the dashboard provides a seamless experience for customers to manage their requests, track progress, and ensure timely fulfillment of their product needs.

**Responsibilities:**

* Designed the Front-end applications using web technologies like HTML5, CSS3, Es6, JavaScript, React JS and Redux Saga.
* Implemented Redux Saga with actions and reducers to implement a sync API call.
* Made use of redux saga middleware to access redux application state and dispatched redux actions.
* Worked in designing the CSS templates for use on all pages on the website working with CSS Background, positioning, text, border, margin, padding, and table.
* Skilled in leading frameworks such as React.js to build high-quality, scalable, and reusable components and Front-end solutions.
* Developed UI components for email and link sharing of documents and files for a Content Management System using Backbone.js and React Promises.
* Working with Axios Library to fetch data from network requests.
* Elegantly used React-Router techniques Axios service to retrieve data from the server synchronously in the background without interfering with the display and existing page interactively.
* Used Babel.js to transpile ES6 and JSX into JavaScript.
* Designed a web application for both the company user and customer user with different Login and Sign-up authorization.
* Implemented unit and integration testing for all layers of the applications using frameworks like JUnit, and Jasmine.
* Used JIRA for Bug Tracking and JSLint for ensuring quality code.
* Developed the unit testing scripts using JEST and for end-to-end testing I used Cypress.

**Environment:** CSS3, HTML5, React, Redux-Saga, Visual Studio, MongoDB, Axios, JavaScript, React Router, Jest, Cypress, JS Lint, JSX, ES6, Babel.

**Education Details:**

* Master of Science in Engineering Management from the University of Houston Clear Lake.
* Bachelor of Science in Computer Science from Vignan’s University.