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| **Bharat Chundru**  **Software Engineer**  +1 (217) 953 5539|Atlanta, GA  Gmail: chundrubharat6699@gmail.com | [LinkedIn](http://www.linkedin.com/in/bharat-chundru)  [Portfolio](https://bharat-0099.github.io/website/) |

**SUMMARY**

* **Passionate** and **Result**-**Driven** **Software** **Engineer** with **2+** **years** of experience in developing scalable, high-performance systems and applications.
* Expertise in **Java**, **Python**, **Spring Boot**, **React**, **Node.js**, and **MongoDB**, with hands-on experience in **MERN** Stack, microservices, and **distributed** **systems**.
* Adept at clean code architecture, leveraging design patterns, **CI/CD** **pipelines**, and **DevOps** practices using **Jenkins**, **Docker**, and **K8s** for reliable, production-ready systems.
* Skilled in optimizing database performance with **Hibernate**, **MongoDB** **Aggregations**, and **HikariCP** **connection** **pooling**, reducing query latency and improving scalability.
* Experienced in data preprocessing and model building for machine learning with **Logistic** **Regression**, **Random** **Forest**, and advanced feature engineering, achieving model accuracy above 90%.
* A **proactive** **collaborator** in **Agile** **teams**, excelling in **sprint** **planning**, **pull** **request** **reviews**, and utilizing advanced **Git** **workflows** for seamless **version** **control** and delivery.

**WORK EXPERIENCE**

**Kube IT Suwanee, GA**

**Software Engineer Feb 2024 – Present**

**Project: Illinois Department of Innovation & Technology (DoIT)**

* Developed responsive user interfaces using **HTML5**, **CSS3**, and **Bootstrap Grid System**, leveraging **Flexbox** and **media queries** to ensure cross-device compatibility and enhanced accessibility.
* Reduced code redundancy by 25% by implementing reusable React components using **React Hooks** (**useState**, **useEffect**) and optimizing state management with **Redux Toolkit**, including **reducers**, **middleware**, and **selectors**.
* Built a **high-concurrency payment processing system** using **Spring Boot Async Programming** with **@Async** and **CompletableFuture**, improving throughput by 40%. Utilized **ThreadPoolTaskExecutor** to optimize thread management and avoid bottlenecks during bulk API calls.
* Solved **slow database queries** in a multi-tenant application by implementing **Spring Data JPA Specifications** with dynamic query filters and **@EntityGraph** for lazy loading, reducing query time by 60%.
* Enhanced deployment frequency by 50% through Agile methodologies, actively participating in sprint planning, backlog grooming, and performing **pull request (PR) reviews** using tools like **Bitbucket** and **GitHub**.
* Automated CI/CD pipelines with **Jenkins**, configuring pipeline scripts (**Jenkinsfile**) to automate builds, run unit tests with **JUnit 5**, and deploy artifacts to **Nexus Repository Manager**. Utilized **Docker** to containerize applications for consistent deployments across environments on **EKS**.

**University of Illinois** Springfield, IL

Research Assistant Feb 2023 - Dec 2023

* Designed and developed a **highly performant REST API** using **MongoDB** with **Spring Boot**, implementing **pagination and aggregation pipelines** to handle complex data queries, reducing data retrieval time by 50% for research projects.
* Built a **dynamic MERN-Stack web application**, integrating **Redux for state management** and implementing **D3.js** for real-time data visualization, enabling researchers to process and analyze datasets with 30% higher efficiency.
* Conducted workshops on **advanced Git workflows**, including **rebasing, cherry-picking**, and conflict resolution techniques, improving students' proficiency in version control and collaborative development practices.

**APSSDC (Andhra Pradesh State Skill Development Corporation)** Vijayawada, India

Software Engineer Intern Jun 2020 - Aug 2020

* Designed and maintained **web applications** using **HTML5**, **CSS3**, and **JavaScript**, integrating **AJAX** for real-time updates and optimizing backend logic with **Java EE Servlets**, **JSP**, and **JDBC**, achieving a **30% performance boost** in request handling.
* Built a **job portal** with modular features such as **JWT-based authentication**, **OAuth2 login integration**, and **role-based access control (RBAC)**. Enhanced search functionalities with **Elasticsearch** and **filter-based indexing**, reducing search latency by 40%.
* Developed an **automated testing framework** using **JUnit** for backend unit testing and integrated **Maven build profiles** for environment-specific configurations, ensuring efficient builds and consistent test coverage.

**PROJECTS**

**Portfolio website**

* Developed a **responsive portfolio website** using **HTML5**, **CSS3**, **JavaScript**, and **ReactJS**, integrating a **contact form** with **email functionality** via **EmailJS**, enhancing user engagement.
* Designed and implemented **custom React Hooks** for modular and reusable logic, managing **form validation**, **state management**, and **API integration**, improving development efficiency.
* Optimized website performance by leveraging **lazy loading** with **React Suspense** and **code-splitting** using **React Router**, reducing page load times significantly.

**E-** **Commerce platform**

* Developed a **full-stack E-commerce platform** using **React** for a dynamic and responsive UI, **Node.js** for scalable server-side processing, and **MongoDB** for NoSQL database management.
* Implemented key features such as **JWT-based user authentication**, **product catalog with pagination**, **shopping cart with Redux state management**, and **real-time order tracking** .
* Enhanced application performance by optimizing **MongoDB queries** with **indexes** and integrating **Redis caching** for frequently accessed data, reducing server response time.
* Ensured cross-device compatibility with **responsive design principles** and achieved seamless UX through integration with **payment gateways** like Stripe, enabling secure and efficient transactions.

**Heart Disease Prediction**

* Designed and implemented a **heart disease prediction system** using **Logistic Regression** and **Random Forest**, leveraging **scikit-learn** for efficient algorithm deployment.
* Preprocessed raw medical datasets with techniques like **scaling, one-hot encoding**, and **PCA** to reduce dimensionality, and engineered key features such as **cholesterol levels**, **blood pressure**, and **BMI** to enhance predictive accuracy.
* Achieved a **94% model accuracy** through advanced **hyperparameter tuning** using **GridSearchCV** and **cross-validation**, ensuring model robustness and reliability across test datasets.
* Visualized critical health metrics with **Matplotlib** and **Seaborn**, enabling data-driven insights for feature correlation and improving interpretability of the classification results.

**EDUCATION**

**University of Illinois Springfield** Springfield, IL

**Master of Science, Computer Science Aug 2022 - Jan 2024**

**GPA: 3.84**

* Courses: **Database Management System, Machine Learning, Data Visualization, Statistical Concepts, Distributed Systems, Object Oriented Programming, Web Design, Big Data**

**Technical Skills**

* **Programming Languages**: Java (JDK 8+, Multithreading, CompletableFuture), JavaScript, (ES6+, Async/Await) Python, SQL, Bash
* **Databases**: MongoDB, MySQL, Oracle DB (PL/SQL), PostgreSQL, Redis
* **Frontend**: HTML5, CSS3, Bootstrap, JavaScript (Vanilla DOM Manipulation), Material-UI, ReactJS (React router, Redux Toolkit, React Context API, Custom Hooks, Lazy Loading with Suspense)
* **Backend**: Spring Boot, Node.js, Hibernate
* **API**: REST API((Pagination, HATEOAS), GraphQL (Resolvers, Queries, Mutations)
* **Version Control**: Git, GitHub, GitLab, Bitbucket
* **Machine Learning**: scikit-learn, TensorFlow, Random Forest, Logistic Regression
* **CI/CD**: Jenkins, GitHub Actions, Nexus Repository, Docker
* **Testing Frameworks**: JUnit 5, Mockito, Jest, Postman/Newman (API Automation)
* **Cloud**: AWS(EC2, S3, Lambda), GCP:(Compute Engine, Cloud Pub/Sub, BigQuery)
* **Development Practices**: Agile (Scrum, Kanban), Test-Driven Development, Behavior-Driven Development
* **Miscellaneous**: IntelliJ IDEA, VS Code, Maven, Gradle, Microsoft Office Suite