# Bharat Chundru

**Software Engineer**
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Portfolio: **https://bharat-0099.github.io/website/**

## SUMMARY

Passionate and results-driven Software Engineer with over 1+ year of professional experience in designing and developing scalable, high-performance web applications, APIs, and microservices. Proficient in Java, Python, Spring Boot, React, distributed systems, cloud computing, and Docker, with expertise in leveraging design patterns, clean code practices, and CI/CD pipelines to deliver high-quality solutions.

## WORK EXPERIENCE

**Kube IT**                                                                                                                 **Suwanee, GA**
**Software Engineer**                                                                                    **Mar 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%.
- Implemented scalable **RESTAPI and GraphQL APIs** using **Spring Boot and Java**, enabling efficient data retrieval and manipulation. Integrated backend services with dynamic query resolvers and mutation handlers for modularized and optimized data flow.
- Leveraged **Docker** to containerize applications, ensuring consistent deployments across environments, and utilized **AWS Lambda** for serverless execution, **DynamoDB** for real-time data handling, and **Amazon S3** for efficient asset storage management.

**APSSDC (Andhra Pradesh State Skill Development Corporation)**                          **Vijayawada, India**
**Software Engineer Intern**                                                                              **Jun 2022 - Aug 2022**
- 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)** using **RESTful APIs**. 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 the 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 , PostgreSQL
- **Frontend**: HTML5, CSS3, Bootstrap, JavaScript 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
- **Data Engineering**: Feature engineering, data preprocessing, and deploying ML models
- **CI/CD**: Jenkins, GitHub Actions, Nexus Repository, Docker
- **Testing Frameworks**: JUnit 5, Mockito, Jest, Postman, LoadRunner
- **Cloud**: AWS(EC2, S3, Lambda,  DynamoDB), GCP:(Compute Engine, Cloud Pub/Sub, BigQuery)
- **Development Practices**: Agile (Scrum, Kanban), Test-Driven Development, Behavior-Driven Development

## Licenses & Certifications

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|---|---|
| **Walmart: Advanced Software Engineering** | **Credentials ID: RYBbQhkgZv84qFFFf** |
| **Accenture - Coding: Development & Advanced Engineering** | **Credentials ID: YcYhvTixKPSskxwkX** |
| **Wells Frago - Software Engineering** | **Credentials ID:dK86L4YtGMMpZ3Txn** |