Learning Roadmap After Java Spring Boot + ReactJS

1. Cloud-Native & DevOps (High Priority)

Learn:

- Docker - containerize your apps.

- Kubernetes (K8s) - orchestrate containers in clusters.

- CI/CD tools - Jenkins, GitHub Actions, Azure DevOps.

- Cloud platforms - AWS, Azure, or GCP.

  - Services like Lambda, API Gateway, S3, RDS, EKS, etc.

- Terraform - Infrastructure as Code (IaC).

These are critical for enterprise and scalable cloud-native development.

2. Backend Architecture & Advanced Java

Learn:

- Spring Cloud (Config Server, Eureka, Gateway, Resilience4j).

- Reactive Programming with Spring WebFlux.

- Messaging systems: Apache Kafka, RabbitMQ.

- GraphQL: Modern API alternative to REST.

- Performance tuning with JPA, Redis caching, and distributed transactions.

3. Frontend Advanced: React Ecosystem

Learn:

- Next.js - React with server-side rendering.

- TailwindCSS or Material UI - for clean UI.

- Redux Toolkit, Zustand - state management.

- React Query or SWR - data fetching and caching.

- Progressive Web Apps (PWA) or React Native for mobile.

4. System Design & Architecture

Learn:

- Design Patterns (Factory, Builder, Strategy, etc.).

- System design topics: caching, sharding, CAP Theorem.

- HLD & LLD diagrams.

- Load balancing, API Gateway, Event-driven architecture.

- Use 'Grokking System Design Interview' for structured learning.

5. Data & Analytics (Optional but Valuable)

Learn:

- ELK Stack: Elasticsearch, Logstash, Kibana.

- Time-series databases: InfluxDB, Prometheus.

- Apache Spark/Flink for big data or real-time data pipelines.

6. Bonus: AI / LLM Integration

Learn:

- Use OpenAI or HuggingFace APIs.

- LangChain for backend LLM orchestration.

- Integrate smart assistants, chatbots, or recommendation engines into your apps.

Suggested Paths

-> For Senior Developer / Architect Roles:

   Learn Kubernetes, Spring Cloud, Kafka, System Design.

-> For Full-Stack Product Development / Startups:

   Learn Next.js, Tailwind, GraphQL, and CI/CD.

-> For AI Exploration:

   Learn OpenAI API and integrate into Java/React projects.