NIKHIL GANDE

Software Developer

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A dedicated and skilled Software Engineer with over 8+ years of experience in designing, developing, and maintaining robust and scalable software solutions. Proficient in Java, Kotlin, J2EE, Spring Frameworks (including Spring Boot), and ORM tools like Hibernate and JPA. Excels in full-stack development, with expertise in front-end technologies such as JavaScript, HTML, CSS, Bootstrap, and advanced UI frameworks like React and Angular. Demonstrates strong proficiency in building back-end services using RESTful APIs, complemented by extensive experience in database design, complex SQL queries, and MongoDB (NoSQL). Well-versed in Git for version control and highly experienced in Agile methodologies. Recognized for exceptional problem-solving skills and a proven ability to collaborate effectively with cross-functional teams to deliver high-quality software. Possesses in-depth knowledge of algorithms, data structures, and design patterns, along with extensive hands-on experience with DevOps tools like Jenkins, Docker, and AWS cloud services. Adept at working in Unix/Linux environments.

TECHNICAL SKILLS

Category	Technologies
Programming Languages	Java (8/11/17), Kotlin, C, J2EE, TypeScript, Python, JavaScript
Frameworks	Spring Framework (MVC, Security, Data JPA, Cloud, WebFlux), Hibernate (ORM, Search, Validator), JSF, Struts 2, NodeJS, SpringBoot, ReactJS
Cloud Platforms	AWS (EC2, RDS, S3, DynamoDB, Lambda, CloudFormation, CloudWatch, CodePipeline, CodeBuild, Elastic Beanstalk), Docker, Kubernetes, Terraform
Mark-up/XML Technologies	XML, XSD, JSON
Web/App Servers	Apache Tomcat, JBoss/WildFly, Jetty
Databases	Oracle, MySQL, PostgreSQL, DB2, MongoDB, Cassandra
Web Services/API Services	REST (JAX-RS, Spring REST), SOAP (JAX-WS), GraphQL, OpenAPI/Swagger
Testing Tools	JUnit, Mockito, TestNG, AssertJ, WireMock, Cucumber, Selenium, JMeter, Postman, Karate
Logging/Others	Log4j/Logback, SLF4J, Micrometer, Prometheus, Grafana
Version Control	Git, GitHub, GitLab, Bitbucket
Development Tools/Environments	Maven, Ant, Eclipse, IntelliJ IDEA, Visual Studio Code, Jira, PyCharm, Jupyter, Gradle
Middleware/Messaging Systems	Apache Kafka, RabbitMQ, ActiveMQ, Apache Camel, Spring JMS
CI/CD Tools	Jenkins, GitLab CI/CD, Docker Hub, AWS CodePipeline, AWS CodeBuild, Bamboo
Other Tools and Technologies	UNIX, Apache Tomcat, Hibernate Search, Apache Cassandra-Spark Connector, Dropwizard, ELK Stack (Elasticsearch, Logstash, Kibana), Ansible, Kubernetes Helm, Perl, JMS (Java Messaging Service), Apache Maven, Shell
Soft Skills	Problem Solving, Communication, Teamwork, Leadership, Adaptability



EXPERIENC	17

Bank of Montreal, Chicago IL

Software Developer

Dec 2023 - Present

Project Description: Developed a secure and scalable web application for BMO customers to manage checking accounts efficiently. Features include real-time transaction tracking, account insights, fund transfers, and secure bill payments. The platform utilizes modern front-end, back-end, and cloud technologies for an enhanced customer experience and operational efficiency

Frontend Development:

- Developed a responsive web application using **ReactJS**, **HTML**, **CSS**, and **JavaScript**, providing a seamless and user-friendly interface for **BMO customers** to manage their checking accounts
- Implemented real-time transaction tracking and account insights using **WebSocket** and **RESTful APIs** to ensure users receive up-to-date financial data.
- Applied **React performance optimization** techniques, such as **React.memo** and **shouldComponentUpdate**, to reduce unnecessary re-renders and enhance application speed.
- Developed real-time alert and notification systems using **WebSocket** through **Node.js** and **Push API**, ensuring timely updates for unusual consumption patterns and system changes.
- Developed a responsive mobile version of the consumer dashboard using **React Native**, integrating APIs for consistency with the **web application**.
- Designed and built a reusable component **library** using **ReactJS** to ensure consistent **design** and **expedite** development.
- Applied responsive design principles using CSS Grid to enhance user accessibility across desktops, tablets, and mobile
 devices.
- Integrated D3.js and Chart.js to create **interactive graphs** and charts for **visualizing** transaction data, providing dynamic and informative user insights.
- Utilized usability **testing tools** and **ReactJS** to iteratively refine the user interface based on user feedback, significantly enhancing the overall **user experience**.

Backend Development:

- Led the end-to-end development of secure and scalable back-end services using **Java**, **Node.js**, and the **Spring Boot** framework, enabling BMO customers to manage checking accounts, perform fund transfers, and track transactions efficiently.
- Leveraged **Apache Kafka** and **Node.js** to implement real-time transaction data streaming, ensuring seamless ingestion, processing, and delivery of real-time account updates, critical for timely financial reporting.
- Designed and implemented highly scalable and reliable data storage solutions using **Amazon RDS** for structured, relational customer data and **Amazon DynamoDB** for high-velocity transactional data, ensuring optimal performance and scalability
- Developed a suite of independent, highly maintainable microservices for account management, transaction tracking, and bill payment processing, with a focus on scalability and the separation of concerns
- Ensured smooth integration between microservices, implementing RESTful APIs **using Spring Boot** and Node.js to enable efficient communication and data exchange between the front-end application and back-end services..
- Implemented **GraphQL** using Node.js to enhance data fetching capabilities, reducing query performance overhead, and optimizing data retrieval for improved user experience and external system integrations.
- Applied robust design and testing strategies to secure and optimize APIs, implementing security measures such as input validation, rate limiting, and optimizing API response times for a secure, high-performance experience.
- Applied comprehensive design and testing strategies to ensure the security and performance of APIs. This included addressing potential vulnerabilities and optimizing response times to safeguard data and enhance user experience.
- Integrated Spring Security and **JWT (JSON Web Tokens)** to implement secure user authentication and Role-Based Access Control (RBAC), effectively managing user permissions and protecting sensitive customer data
- Followed industry best practices to protect sensitive data and ensure the system's integrity. This involved implementing encryption, secure data transmission protocols, and regular security audits.
- Utilized Spring Boot Actuator and AWS CloudWatch for real-time performance monitoring and system health checks, providing valuable insights into system metrics and operational status for improved decision-making..
- Optimized back-end performance by identifying and addressing system bottlenecks through performance tuning, including database query optimization, indexing, and minimizing transaction processing latency
- Focused on **optimizing data** handling processes, including **data ingestion** rates and storage efficiency. This involved **fine-tuning database** configurations and **leveraging efficient data** processing techniques.
- Designed scalable solutions capable of handling increasing user demands and data volumes, implementing fault-tolerant mechanisms such as load balancing and database replication for high availability and system reliability..
- **Documented** all development processes, architectural decisions, and API specifications thoroughly to ensure clarity, promote team collaboration, and support ongoing enhancements, debugging, and troubleshooting efforts.

Cloud:

- Successfully deployed the Smart Metering application on **Amazon Web Services (AWS)**, utilizing **EC2** for scalable compute resources, **S3** for secure and reliable storage of application data and logs, **RDS** for managed relational database services, and **Lambda** using **Node.js** for serverless computing to handle event-driven functions.
- Streamlined application deployments using **AWS Elastic Beanstalk**, ensuring automatic scaling, load balancing, and resource optimization.
- Automated build, test, and deployment processes by implementing robust CI/CD pipelines using AWS CodePipeline, CodeBuild, and CodeDeploy. This reduced manual intervention, accelerated delivery cycles, and improved reliability..
- Configured automated testing within CI/CD pipelines to validate code changes and ensure high-quality releases, reducing time
 to market while enhancing software stability.
- Deployed **Amazon Kinesis** for real-time transaction data streaming, enabling high-velocity data ingestion, processing, and analysis to support timely insights and account activity responsiveness.
- Utilized **AWS CloudFormation** to automate the provisioning and management of **infrastructure**. Designed Infrastructure as Code (**IaC**) templates for consistent and reproducible deployments across development, staging, and production environments
- Implemented scalable infrastructure solutions to accommodate varying workloads and ensure **high availability** and **performance**.
- Monitored system performance and resource utilization with **AWS CloudWatch**, creating custom **dashboards** and **alarms** to proactively address bottlenecks and ensure application reliability.
- Implemented real-time log analysis and debugging using AWS CloudWatch Logs Insights, ensuring smooth troubleshooting and performance monitoring

Environment: Java, Spring Boot, Apache Kafka, DB2 (relational), Cassandra (NoSQL), RESTful APIs, GraphQL, Node.js, Actuator, Dropwizard, JWT (JSON Web Token), Role-Based Access Control (RBAC), HTML, CSS, JavaScript, ReactJS, D3.js, Chart.js, React Native, WebSocket, Push API, Amazon Web Services (AWS), EC2, S3, RDS, Lambda, Elastic Beanstalk, Kinesis, CloudFormation, CloudWatch, CloudTrail, AWS CodePipeline, CodeBuild, CodeDeploy, AWS ECS, AWS EKS, Git, JUnit.

Universal Orlando, Orlando, FL

Jan 2022 - Nov 2023

Software Developer

Project Description: Played a key role in redesigning the Universal Orlando digital platform, focusing on improving the user experience for ticket and hotel bookings. Worked collaboratively with design and development teams to create a seamless, intuitive interface. Enhanced platform performance and user engagement, contributing to a more efficient and enjoyable online experience for visitors.

Frontend Development:

- Focused on user experience (UX) and accessibility, leveraging Vue.js to create dynamic interfaces.
- Ensured a consistent experience on both desktop and mobile platforms using Vue.js's flexible component system.
- Ensured usability for individuals with disabilities by integrating accessibility features into Vue.js components.
- **Streamlined** UI development, improved **code maintainability**, and **accelerated** the development process by taking advantage of Vue.js's **component-based architecture**.
- Used Vue.js lifecycle hooks and reactivity system to enhance application performance and responsiveness.
- Improved initial page load times and boosted **search engine optimization (SEO)** by implementing **server-side** rendering in Vue.js applications.
- Enhanced user satisfaction with faster page loads by using **Nuxt.js** to pre-render pages on the server before sending them to the client.
- Ensured users receive timely and accurate data by integrating Vue.js with real-time data handling techniques.
- Allowed live updates and notifications without requiring page refreshes, using Vue.js and WebSocket protocols.
- Ensured a consistent and synchronized user experience across different components and views by managing state centrally with Vuex in Vue.js applications.

Backend Development:

- Developed a **microservices architecture** to manage core banking functionalities, such as user management, transaction processing, and account services, ensuring **scalability** and **fault tolerance**.
- Architected microservices to support independent deployment and management, improving system reliability and enabling efficient scaling during high-traffic periods.
- Implemented fault-tolerant designs to ensure platform robustness and availability, allowing for automatic recovery from service disruptions..
- Used Docker to containerize microservices, ensuring consistency across different environments and streamlining deployment across development, staging, and production stages.
- Utilized Kubernetes for orchestration, managing containerized services and automating deployments to ensure smooth scaling during peak traffic.
- Developed secure and well-documented **RESTful APIs** using **Spring Boot** to enable efficient communication between **frontend** and **backend** systems.

- ntegrated GraphQL to enable efficient data querying and reduce the number of API calls, improving performance for users accessing booking information.
- Managed data storage and retrieval with MySQL and MongoDB, balancing relational and NoSQL needs to ensure smooth handling of customer and transaction data..
- Designed and optimized database schemas and queries to handle high transaction volumes during peak seasons, ensuring system performance and data integrity..
- Utilized Hibernate and Spring Data JPA for object-relational mapping, simplifying data access and ensuring efficient interaction with the database.
- Ensured data consistency and accuracy across distributed services through effective data management practices and transactional support.
- Implemented communication mechanisms between **microservices**, including synchronous and asynchronous messaging patterns to handle **inter-service interactions**.
- Applied security best practices to **RESTful APIs**, including authentication and authorization mechanisms to protect sensitive banking data and **prevent unauthorized access**.
- Created comprehensive API documentation to facilitate easy integration and usage by frontend teams and external systems.
- Monitored and **optimized backend services** for performance, leveraging profiling tools and best practices to enhance response times and resource efficiency.

Cloud:

- Deployed and managed the digital banking application on AWS, utilizing services such as EC2, S3, RDS, and Lambda to ensure scalability and high availability.
- Implemented CI/CD pipelines using **Jenkins** and **AWS** CodePipeline to automate **build**, test, and deployment processes, streamlining the release cycle and reducing time-to-market.
- Leveraged **AWS Elastic Beanstalk** for simplified application deployment and scaling, enabling the application to handle peak usage periods effectively and maintain **reliable performance**.
- Configured real-time data processing using **Amazon Kinesis** and **AWS Lambda**, ensuring timely and accurate handling of live transactions and updates.
- Utilized **Amazon Kinesis** for ingesting and processing real-time **data streams**, providing up-to-date information to end-users and enhancing the **responsiveness** of the application.
- Automated infrastructure provisioning and management with **AWS CloudFormation** and **Terraform**, enabling consistent and **reproducible deployments** across development, testing, and production environments.
- Set up comprehensive monitoring with **AWS CloudWatch** for real-time performance tracking and alerting, facilitating proactive **issue resolution** and ensuring application **stability**.
- Integrated the ELK stack (Elasticsearch, Logstash, Kibana) for centralized logging and data visualization, improving system visibility and aiding in effective troubleshooting.
- Applied robust security protocols using Spring Security and OAuth2 to protect sensitive financial data, implementing secure token-based authentication and role-based access control (RBAC).
- Ensured adherence to financial industry regulations and compliance requirements, including **data protection** and **privacy laws**, by conducting regular security audits and updating practices to meet **evolving standards**.

Environment: Java, Spring Boot, Docker, Kubernetes, Spring Security, Hibernate, MySQL, MongoDB, Vue.js, Search Engine Optimization (SEO), Nuxt.js, WebSocket, Vuex, Amazon Kinesis, AWS (EC2, S3, RDS, Lambda), AWS Elastic Beanstalk, AWS CodePipeline, Jenkins, AWS CloudFormation, Terraform, AWS CloudWatch, ELK Stack, OAuth2.

Kohls, Milwaukee, WI Nov 2019 – Dec 2021

Software Developer

Project Description: Developed a seamless platform integrating e-commerce and in-store shopping experiences for Kohl's as a Full Stack Developer. Designed and implemented features for intuitive navigation, personalized recommendations, and efficient checkout processes. Optimized backend systems to enhance inventory management and enable data-driven decision-making. Collaborated with cross-functional teams to deliver scalable, user-centric solutions. Contributed to improving digital efficiency, customer satisfaction, and business growth.

Frontend Development:

- Built intuitive, responsive, and interactive user interfaces for IT infrastructure management using **AngularJS** and **JavaScript**, enhancing usability, accessibility, and user engagement across the platform
- Utilized **AngularJS's** built-in **directives** and **CSS Flexbox/Grid** to ensure consistent functionality and a seamless experience across various devices and screen sizes, adhering to responsive design principles.
- Applied **ARIA** roles and web accessibility standards within AngularJS components to comply with **WCAG** guidelines, making the platform more inclusive for users with disabilities.
- Created and managed dynamic, reusable UI components with AngularJS and implemented state management using services and AngularJS's **dependency injection**. This resulted in an engaging and efficient user experience.

- Implemented **WebSocket** connections for real-time data updates and used AngularJS with libraries like **D3.js and Chart.js** to develop interactive charts and dashboards. This setup provided actionable insights and enhanced system responsiveness..
- Employed AngularJS **performance techniques** such as **one-time bindings**, `**\$watch**` optimizations, and **lazy loading** to reduce unnecessary re-renders and improve **application speed** and responsiveness.

Backend Development:

- Designed and maintained **RESTful APIs** using **Java** and **Spring Boot** to provide secure and efficient access to key management functions for managing **embedded software**, including **provisioning**, **configuration**, and monitoring.
- Implemented robust security measures in **API development** to ensure **secure data** transmission and **access control**, enhancing overall **system integrity**.
- Designed APIs with **scalability** in mind, enabling **efficient** handling of increased **traffic** and user demands, thus ensuring **high availability** and **performance** of the embedded software for monitoring energy consumption.
- Created comprehensive **API documentation** to facilitate ease of integration and use by other developers, improving the **maintainability** and **usability** of the APIs.
- Developed and integrated **complex business logic** for infrastructure automation and management tasks, optimizing operational **workflows** and **system performance**.
- Built services for automated provisioning of **infrastructure resources**, reducing manual intervention and **accelerating deployment processes**.
- Developed configuration management **services** to automate and manage **system settings**, enhancing **consistency** and reducing **configuration errors**.
- Created **services** for **performance** monitoring and **reporting**, integrating with automation tools to provide **real-time insights** and alerts on system performance.
- Utilized MySQL and MongoDB for scalable and efficient data storage solutions, handling large volumes of IT infrastructure metrics and configurations.
- Designed and optimized database schemas using Hibernate and Spring Data JPA, ensuring high performance and scalability in data retrieval and management.
- Applied authentication and authorization protocols to safeguard sensitive data, ensuring compliance with security standards and regulations.
- Created data access layers using Hibernate and Spring Data JPA for seamless interaction between the application and the database, improving data manipulation efficiency.
- Incorporated **automation tools** into the **backend services** to streamline infrastructure management tasks, enhancing overall **operational efficiency**.
- Ensured data integrity and consistency across the system by implementing robust error handling and validation mechanisms in backend services.
- Developed and maintained **backend services** that contributed to the overall reliability and stability of the IT infrastructure management platform, supporting **core functionalities** and operational processes.

Cloud:

- Deployed and managed applications on AWS using EC2 and RDS, ensuring scalability and high availability. Implemented CI/CD pipelines with Jenkins and AWS CodePipeline to automate deployment and scaling, optimizing performance during peak loads.
- Utilized AWS CloudFormation and Terraform for Infrastructure as Code (IaC), automating the provisioning and management of cloud resources. Developed templates and scripts to ensure consistency and reproducibility across different environments.
- Configured real-time data processing solutions using **Amazon Kinesis** and **AWS Lambda** to handle live **performance metrics** and alerts. Enabled the system to process and analyze **data streams** in real time, providing timely **insights** and notifications.
- Set up AWS CloudWatch for real-time monitoring of application performance and infrastructure health. Implemented alerting mechanisms to proactively address performance issues and maintain system reliability.
- Integrated the ELK stack (Elasticsearch, Logstash, Kibana) for centralized logging and data visualization. Enhanced visibility into system operations and facilitated effective troubleshooting by aggregating and analyzing log data.
- Leveraged **AWS services** and tools to optimize cloud resource usage, ensuring efficient performance and cost management. Implemented **auto-scaling** and **load balancing** to handle varying loads and maintain **high availability**.
- Automated **deployment** processes with **CI/CD pipelines**, reducing manual **intervention** and accelerating **release cycles**. Ensured consistent and **reliable deployment** of application updates.
- Managed **infrastructure** through **automated scripts** and **templates**, reducing the risk of **human error** and improving the efficiency of **cloud resource management**.
- Configured **performance monitoring** and **alerting** systems to detect and respond to issues in real time, ensuring the application remained **performant** and **stable** under varying conditions.
- Implemented security **best practices** and **compliance measures** for cloud resources, including **access control** and **data encryption**, to protect **sensitive** information and ensure **adherence** to regulatory standards.

Environment: Java, Spring Boot, RESTful APIs, MySQL, MongoDB, ORM, Hibernate, Spring Data JPA, JavaScript, AngularJS, CSS Grid, AIRA roles, AngularJS's Dependency Injection, WebSocket, D3.js, Chart.js, ELK Stack, Amazon Web Services (AWS), AWS EC2, AWS RDS, AWS Lambda, Amazon Kinesis, AWS CloudFormation, Terraform, Jenkins, AWS CodePipeline, AWS CloudWatch, Encryption.

Zomato, Hyderabad India Dec 2016 – October 2019

Software Developer

Project Description: Contributed to various initiatives at Zomato, a leading global restaurant discovery and food delivery service. Collaborated with cross-functional teams to enhance the platform's functionality, focusing on improving user experience, scaling the system, and optimizing performance. Played a key role in implementing features for restaurant search, order management, and customer interaction, ensuring a seamless experience for both users and restaurant partners. Focused on achieving business goals through innovative solutions and data-driven strategies.

Frontend Development:

- Developed the user interface using **React** to build **dynamic**, **single-page** applications with reusable components, improving code maintainability and performance.
- Created responsive and user-friendly layouts using Bootstrap, ensuring seamless experience across desktop, tablet, and mobile
 devices
- Utilized **React Hooks** (e.g., **useState**, **useEffect**) for managing component state and handling side effects, improving functionality and performance of the application.
- Integrated **React Router** for navigation between different pages such as restaurant listings, individual restaurant details, and user profiles, ensuring smooth and efficient page transitions
- Optimized the user interface for performance by **lazy-loading** images and React components, resulting in faster page loads and a more responsive experience.
- Incorporated form **validations** and real-time feedback using React and Bootstrap components, ensuring that user inputs such as search queries, reservations, and reviews were accurate and efficient.
- Created reusable **React components** for various **UI elements**, ensuring consistent **design** and reducing development time by leveraging **component modularity**.
- Implemented interactive elements such as **modals**, **tooltips**, and **dynamic forms** to enhance user engagement and provide **immediate feedback**, while optimizing **React components** to minimize unnecessary re-renders and ensure a smooth user experience..
- Implemented accessible rich internet applications roles and properties to improve screen reader compatibility and support assistive technology, ensured comprehensive keyboard navigation, and designed color schemes with sufficient contrast to meet accessibility guidelines.
- Collaborated with UX/UI designers to ensure that the interface met design requirements while improving accessibility, ensuring the application was usable by all users, including those with disabilities.
- Conducted **usability testing sessions** with a diverse group of users, including those with **disabilities**, to identify and address accessibility issues and **gather feedback** for continuous improvement of the **user interface**.

Backend Development:

- Developed robust RESTful APIs using **Java** and **Spring Boot** to enable seamless communication between frontend and backend, providing efficient access to restaurant data, user profiles, and reviews.
- Created and **documented** API endpoints for core functionalities such as restaurant search, menu retrieval, review submission, and reservation management, ensuring clear documentation for frontend and external system integrations.
- Implemented complex business logic for processing restaurant data, including menu updates, user reviews, order management, and integration with external APIs, ensuring high accuracy and efficiency.
- Ensured robust data security through **authentication** and **authorization** mechanisms, utilizing technologies like **JWT (JSON Web Tokens)** to secure user data and sensitive restaurant information
- Incorporated comprehensive error handling and data validation in APIs to ensure data integrity and provide actionable error messages for troubleshooting.
- Utilized **MongoDB** for managing unstructured restaurant data, reviews, and user profiles, enabling efficient storage, retrieval, and scalability of large datasets.
- Designed and optimized MongoDB schemas to support high-performance querying, including indexing and optimized data structures, improving overall API response times..
- Conducted performance tuning of database queries to ensure fast response times for restaurant data retrieval, optimizing query execution plans and indexing strategies.
- Implemented data backup and recovery strategies to ensure reliable preservation of restaurant data, user reviews, and transactions in case of system failures or data loss.
- Designed a scalable backend architecture to handle increasing traffic and data volume, incorporating techniques such as sharding and database replication to maintain performance and availability.

Cloud:

- Deployed the application using **AWS EC2** instances to ensure high availability and flexibility, allowing for seamless scaling based on traffic and resource demands..
- Leveraged AWS S3 for storing and serving large media files such as restaurant images, menus, and user-generated content, ensuring secure and efficient storage..
- Implemented **AWS Elastic Load Balancer (ELB)** to distribute incoming traffic across multiple EC2 instances, enhancing the availability and reliability of the application.
- Utilized **AWS CloudWatch** for monitoring the application's performance, setting up alarms and dashboards to track server health, and enabling rapid issue resolution
- Set up **AWS Lambda** functions for serverless processing tasks, including event-driven actions like sending notifications or processing background jobs without managing servers.
- Used **AWS IAM** for managing access control and permissions, ensuring secure interactions between different services and users while protecting sensitive data..

Environment: Java, Spring Boot, Restful, HL7/FHIR, MonoDB, ORM (Object-Relational Mapping), Spring Data MongoDB, ReactJS, Redux, CSS, AWS (Amazon Web Services), EC2, RDS.



- Master's in computer science University of Missouri-Kansas City, Kansas City, MO.
- Bachelor of Technology in computer science and Engineering –Sri Indu College of Engineering & Technology, Hyderabad, India.