Karandeep Singh

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Software engineer with 3+ years of experience at Amazon and Kotak Personal Loan, specializing in Java Spring Boot microservices architecture for financial lending and logistics systems. Proven track record of implementing scalable AWS cloud solutions that handle high-volume transactions while maintaining system reliability and performance.

EXPERIENCE

Kotak Mahindra Bank, *Software Developer Engineer 2* | Remote (Gurgaon, India)   Jun 2023 - Present

- **Architected** and **implemented** a state machine orchestration framework for personal loan journeys using microservices and JSON-based directed graphs, **improving system reliability by 35%** and **reducing development** time for new loan products by 40%.
- **Engineered** a session-sharing API enabling seamless authentication between Kotak's mobile app and embedded loan web view, **eliminating** redundant OTP verification and creating a frictionless customer journey that **drove a 20x increase** in daily loan disbursements (1 crore to 20 crore).
- **Spearheaded** integration with India's Account Aggregator ecosystem, **implementing** real-time data processing pipelines that analyze customer financial statements via Business Rules Engine (BRE), enabling dynamic loan offer generation that **increased qualified leads by 45%**.
- **Developed** fault-tolerant Temporal workflow orchestrations for complex loan disbursement processes, **implementing** saga patterns and compensation transactions that **ensured transaction consistency** across distributed systems while **scaling** to handle 20 crore in daily disbursements with **99.99% reliability**.
- **Built** a high-throughput validation API performing penny-drop verification and fuzzy name-matching algorithms for non-Kotak bank accounts, **reducing fraud by 65%** while **maintaining** sub-100ms response times at scale.
- **Technical Skills**: Java 17, Spring Boot, Microservices, MongoDB, DynamoDB, AWS (S3, Lambda, SQS), Temporal Workflows, Distributed Systems, AppDynamics, Real-time Monitoring

Lenskart, *Software Developer Engineer 1* | (Gurgaon, India)   Mar 2023 - Jun 2023

- **Architected** and **re-engineered** the mission-critical Order Management System (OMS), implementing **distributed transaction handling** and **fault-tolerance mechanisms** that reduced **failed orders by 93%**, directly impacting company revenue and customer satisfaction metrics
- **Designed** and **implemented** high-throughput order processing workflows with **event-driven architecture**, orchestrating complex business logic across order creation, modification, and cancellation processes while ensuring **data consistency** across distributed systems
- **Technologies:** Java, Spring Boot, MySQL, MongoDB, Apache Kafka, Redis, Microservices, RESTful APIs,

Amazon, *Software Developer Engineer 1* | Remote (Bangalore, India)   Jul 2022 - Mar 2023

- **Engineered** a real-time analytics dashboard for warehouse operations, implementing event-driven data processing pipelines that **reduced problem-solving ticket resolution time by 35%** and **improved operational efficiency** across multiple fulfillment centers
- **Designed** optimized SQL queries for QuickSight dashboards that **increased logistics efficiency by 28%**
- **Technologies**: Java, Kotlin, AWS (Lambda, DynamoDB, CloudWatch, QuickSight), JavaScript, React.js, RESTful APIs, SQL.

SKILLS

Core Engineering	Java, Kotlin, Spring Boot, Microservices Architecture, Object-Oriented Design, System Design, API Design, RESTful APIs, State Management, Responsive Design
Data Management	SQL, MongoDB, DynamoDB, Redis, Data Modeling, S3, Kafka, SNS, SQS
Development Practices	Algorithm Development, Data Structures, Performance Optimization, Scalable Solutions

PROJECTS

Crime Vigilance App | FULL-STACK MOBILE APPLICATION, *SIH 2022 Finalist*   Sept 2021 - Feb 2022

- **Architected** and **developed** a community-driven crime reporting Android application with **real-time data synchronization** and **geo-location services**, enabling citizens to securely submit incident reports with evidence attachments
- **Technologies**: Android SDK, Java, Kotlin, MVVM Architecture, Firebase, Dependency Injection, Material Design, Geospatial Analysis

Wildfire Detection System | DATA-DRIVEN MOBILE SOLUTION (SIH 2020)   Oct 2019 - Feb 2020

- Engineered a mission-critical Android application for crowdsourced wildfire detection and tracking, featuring **push notification alerting system** and **interactive heatmap visualization** that decreased average detection time by 37%
- **Technologies**: Android Jetpack, Java, Kotlin, Firebase, RESTful API Integration, Location Services, Hier Maps API, Data Visualization, IoT Integration

EDUCATION

KIET Group of Institution, *B.Tech in Computer Science and Engineering* | Ghaziabad, India   Jul 2018 - Jun 2022
CGPA: 8.6 / 10.0