Converted BRD

AI BANK BUSINESS REQUIREMENT DOCUMENT Executive Summary: The AI Bank Application leverages AI agents to enhance banking services, improving customer experience, automating key processes, ensuring compliance, and boosting revenue. This BRD outlines the core functionalities, technical specifications, and user stories for the development of this AI-powered banking solution. Business Objective: The AI Bank Application aims to transform traditional banking operations by leveraging AI-driven automation, personalization, and fraud prevention. The key objectives include: Enhancing Customer Experience Provide 24/7 AI-powered customer support. Deliver personalized financial insights based on user behavior. Improve response time for banking queries and support tickets. Automating Core Banking Operations Speed up loan processing and underwriting through AI-based risk assessment. Automate trade finance processes to minimize manual efforts. Optimize compliance checks and regulatory reporting with AI. Boosting Security & Risk Management Implement AI-driven fraud detection to prevent financial crimes. Use anomaly detection to identify unusual transaction patterns. Ensure regulatory compliance through automated document analysis. Driving Revenue Growth & Retention Utilize predictive analytics for better cross-selling and upselling. Improve customer retention by analyzing churn risk and engaging users proactively. Increase operational efficiency by reducing manual workload. Scope: The AI Bank Application will focus on developing AI-powered banking solutions that enhance automation, security, and personalization. Customer-Facing AI Services: AI-powered chatbot and voice assistant for 24/7 customer support. Personalized financial recommendations using predictive analytics. Core Banking AI Automation: AI-driven loan underwriting and approval. Trade finance document automation. AI-powered fraud detection and compliance monitoring. Security & Compliance Features: Multi-factor authentication and biometric verification. AI-based anomaly detection for risk management. Automated regulatory compliance checks. Use Cases: Customer Support Personalized Financial Advisory AML Credit Decision Loan Processing and Underwriting Fraud detection and prevention Compliance and Risk Management Trade Finance Automation Customer Retention & Engagement E-KYC Additional Use Cases: AI-Driven Decentralized Finance & Block chain-based AI banking: While we already placed Fraud detection and compliance AI, DeFi can enhance secure banking by combining with AI and block-chain for Autonomous financial transaction. Use case details: AI detects malicious activities in decentralized transactions. AI-powered autonomous lending platforms with real-time risk adjustments. AI optimizes crypto & digital asset portfolios for better returns. Impact: Helps banks to stay competitive as DeFi threatens traditional banking models. Reduces manual intervention in digital asset management. Use case name | Customer Support Actors | Bank Customer AI Chatbot Human Support Agent Description | An AI-powered chatbot assists customers with common banking queries, transactions, and issue resolution. It escalates complex issues to a human agent if needed. Pre-conditions | Customer is registered with the bank and has an active account.

AI chatbot is available and integrated with the banking system. Post-conditions | Customer receives the required information or service.

If unresolved, the query is escalated to a human agent. Main flow | Customer initiates a conversation with the AI chatbot.

AI chatbot understands the query using NLP.

AI provides an instant response (e.g., account balance, recent transactions).

If the request requires a transaction, AI verifies identity.

Transaction is completed, and confirmation is sent. Alternative flow | If AI cannot resolve the query, it transfers the session to a human agent. Exceptional flow | If system downtime occurs, AI informs the customer and provides alternative contact options. Notes | Supports multilingual communication and voice-based interactions. Use case name | Personalized Financial Advisory Actors | Bank Customer AI Financial Agent Description | AI analyzes a customer's spending habits, income, and goals to provide personalized financial planning advice Pre-conditions | Customer must have an active bank account.

AI agent must have access to transaction data (with customer consent). Post-conditions | Customer receives tailored financial advice. AI tracks progress and updates recommendations. Main flow | Customer inputs financial goals (e.g., home purchase, savings target).

AI analyzes income, spending, and historical data.

AI provides personalized recommendations (e.g., monthly savings plan).

AI sends real-time alerts when financial goals are off track. Alternative flow | Customer can adjust financial goals, and AI recalibrates the plan. Exceptional flow | If insufficient data is available, AI requests additional customer inputs. Notes | AI can suggest investment opportunities based on risk profiles. Use case name | Loan Processing & Underwriting Actors | Loan Applicant AI Credit Scoring System Loan Officer Description | AI automates loan application processing by assessing creditworthiness and offering instant decisions. Pre-conditions | Customer submits a loan application.

AI has access to financial and alternative credit data. Post-conditions | Loan is approved, rejected, or sent for manual review. Main flow | Customer applies for a loan via a banking app.

AI analyzes income, spending, credit history, and alternative data.

AI generates a creditworthiness score.

Loan is either approved with personalized terms or sent for review. Alternative flow | If the customer has an inconsistent credit history, AI suggests alternative loan options. Exceptional flow | If fraud is detected, the application is flagged and blocked. Notes | Reduces human bias in loan approvals. Use case name | Fraud Detection & Monitoring Actors | Bank Customer AI Fraud Detection System Bank Security Team Description | AI monitors transactions in real time and detects suspicious activities. Pre-conditions | Customer has an active account.

AI system is integrated with real-time transaction monitoring. Post-conditions | Fraudulent transactions are blocked or flagged. Main flow | AI continuously monitors customer

transactions.

AI detects unusual activity (e.g., high-value international transaction).

Customer receives an alert for verification.

If confirmed as fraud, the transaction is blocked. Alternative flow | If the customer verifies the transaction, AI marks it as legitimate. Exceptional flow | If multiple failed login attempts occur, AI locks the account and notifies the customer. Notes | AI adapts based on evolving fraud patterns. Use case name | AI-Powered Compliance Monitoring Actors | Compliance Officer AI Compliance System Regulatory Authority Description | AI automates regulatory compliance checks and reporting. Pre-conditions | AI system is trained on compliance rules. Banking transactions are continuously logged. Post-conditions | Suspicious activities are flagged. Compliance reports are generated. Main flow | AI scans transactions for compliance violations.

AI flags high-risk transactions for review.

AI generates regulatory reports. Alternative flow | Compliance officers can override false positives. Exceptional flow | If AI detects a major violation, an automatic alert is sent to regulators. Notes | Supports AML (Anti-Money Laundering) detection. Use case name | Trade Finance Automation Actors | Business Owner AI Trade Finance System Bank Trade Officer Description | AI automates trade finance document verification and processing. Pre-conditions | Business submits trade finance documents.

AI system is integrated with supply chain databases. Post-conditions | Trade finance requests are processed faster. Main flow | Business submits invoices and shipment details.

AI verifies document authenticity.

AI assesses trade risk and approves financing. Alternative flow | If discrepancies are found, AI requests additional documents. Exceptional flow | If fraud is detected, AI blocks the transaction. Notes | AI reduces manual errors and speeds up approvals. Use case name | Customer Retention & Engagement Actors | Bank Customer AI Engagement System Marketing Team Description | AI identifies potential customer churn and offers personalized retention incentives. Pre-conditions | AI has access to customer engagement data. Post-conditions | Customer engagement improves.

Churn rate decreases. Main flow | AI tracks customer interactions and spending patterns.

AI detects inactivity or churn signals.

AI sends targeted offers or reminders. Alternative flow | Customer can decline the offer, and AI adjusts its retention strategy. Exceptional flow | If AI cannot predict behavior, it requests additional customer feedback. Notes | AI enhances customer loyalty with personalized engagement.