**Program Summary:**

# Tata iQ Data Analytics Job Simulation –

## Slide 1: Introduction to the Job Simulation

### Overview: AI-Powered Data Analytics in Banking

This presentation summarizes my participation in the Tata Group Data Analytics Job Simulation, completed in June 2025. This intensive experience immersed me in applying advanced AI and data analytics principles directly within the **banking sector** at Tata iQ. The simulation provided a realistic environment to tackle critical business challenges faced by financial institutions. It showcased the entire journey from raw customer data to actionable insights and automated solutions for optimizing bank operations. We focused on leveraging AI responsibly to drive better decision-making and enhance customer relationships in a banking context. This program significantly enhanced my practical skills in utilizing artificial intelligence to solve complex problems, particularly in financial risk management within a bank's framework. It truly demonstrated how analytics professionals transform complex banking data into clear, impactful business strategies.

## Slide 2: Task 1 - Exploratory Data Analysis (EDA) for Risk Identification

### Understanding Risk: Customer Data & Banking Indicators

My initial significant step involved conducting **exploratory data analysis (EDA)**, a fundamental phase for thoroughly understanding raw customer banking data. I employed various GenAI tools to deeply examine the provided datasets, simulating real-world bank records. The primary objective was to comprehensively **assess data quality** across customer accounts, transaction histories, and loan applications, ensuring reliability for subsequent analysis. Beyond quality, I focused intently on **identifying key risk indicators** specific to banking operations, such as frequent overdrafts, high credit card utilization, or inconsistent loan payments. This involved pinpointing patterns and

relationships between various customer banking attributes and their likelihood of falling into delinquency. By structuring these initial insights from detailed bank data, I built a robust foundation for the predictive modeling phase, ensuring our efforts were precise and relevant to banking risks.

## Slide 3: Task 2 - Predictive Modeling Framework for Delinquency

**Predicting Delinquency: A No-Code AI for Bank Loans**

Following the in-depth data exploration of banking records, I proceeded to propose and justify a **no-code predictive modeling framework**. The core aim here was to develop a system that could accurately assess the risk of **loan defaults or credit card delinquencies** among the bank's customers, all without requiring complex coding expertise. This approach makes the powerful tool accessible to various business teams within the bank. I leveraged GenAI tools to precisely define the structured logic for this model, determining how diverse banking risk indicators would combine to predict potential defaults. A crucial part of this task was establishing clear **evaluation criteria** to measure the model's performance in a banking scenario. This ensured we could quantify how accurate and effective our predictions were for managing the bank's portfolio. This phase was about transforming banking data insights into a practical, repeatable system for identifying high-risk bank customers, preparing the ground for targeted interventions.

## Slide 4: Task 3 & 4 - Designing an AI-Driven Collections Strategy

**Smart Collections: Agentic AI, Ethics & Automation for Banks**

The final and most comprehensive phase involved designing a full-fledged **AI-driven collections strategy**, directly applicable to a bank's operations. This moved beyond just identifying risk to actively automating and optimizing how the **bank interacts with customers** facing repayment challenges. A central component was the integration of **agentic AI**, which refers to AI systems capable of reasoning, adapting, and making autonomous decisions in real-time, allowing the bank to personalize outreach for overdue loans or credit card

balances. Crucially, the design incorporated strong **ethical AI principles**, ensuring fairness, transparency, and accountability in all automated decisions impacting bank customers. Furthermore, robust **regulatory compliance** was embedded from the ground up, guaranteeing strict adherence to specific banking regulations. The framework also detailed a **scalable implementation** plan, outlining how this intelligent system could be effectively deployed across the bank's large customer base and continuously improved over time.

# The end