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DATA GOVERNANCE REVIEW SUMMARY

My analysis of QuickLoan Mobile's data pipelines systematically applied Data Lifecycle Management and Data Classification principles to uncover governance, quality, and ethical risks. Using the Data Lifecycle lens, I traced data through its complete journey from creation (Step 1 - collection in the mobile app) through storage (Step 3 - Raw Data DB), usage (Step 6 - ML model training, Step 7 - decision-making), sharing (Step 8 - customer notifications, Step 10 - third-party partners), and examined whether archival and destruction policies existed. This lifecycle approach immediately revealed critical gaps: no retention policies mean data is never properly archived or destroyed, violating the minimization principle. The "sharing" stage showed PII flowing to analytics and partners without anonymization. Each lifecycle stage should have appropriate governance controls, and QuickLoan had none at critical transition points - especially around consent (before "create"), classification (during "storage"), and transparency (during "usage").

Using Classification principles, I evaluated what data was collected against established sensitivity categories. Contact lists, GPS location, and device logs clearly qualify as Sensitive PII under both Ghana's Data Protection Act and Microsoft's classification framework (Confidential/Sensitive). However, QuickLoan treated all data uniformly with no classification tags, meaning highly sensitive information received the same protection as non-sensitive metadata. Proper classification would have immediately flagged that Sensitive data requires encryption, access controls, consent, and strict retention limits - none of which were present. By cross-referencing lifecycle stages with classification requirements, I pinpointed exactly where governance broke down: excessive unclassified collection at creation, missing consent before storage, no retention during use, and unmasked sharing to analytics.

The proposed Fairness Disparity Score (FDS) metric operationalizes ethical governance by making algorithmic fairness measurable and visible. Instead of vague commitments to "fair lending," the FDS quantifies outcome disparities across demographic groups weekly. The grouped bar chart visualization makes disparities immediately obvious to executives who

may not understand technical ML fairness concepts. When the FDS exceeds the 5-percentage-point threshold, it triggers mandatory investigation and model recalibration, creating accountability. This transforms ethics from aspiration into standard operating procedures, ensuring QuickLoan's automation advances financial inclusion rather than encoding discrimination into algorithms. The metric's transparency also builds customer trust and provides verifiable evidence of compliance with Ghana's Data Protection Act 843 Principle 2 (fair and lawful processing), protecting QuickLoan from both regulatory penalties and reputational damage.