DAT 202 Assignment 4

Colin Bowers - Jun 18, 2024

Scenario 1: Internal Analytics

In this scenario, the organization's internal analytics team is analyzing customer data to identify trends and patterns. The focus is on understanding general behaviors and financial metrics without needing to identify specific customers. Assumptions:

- The analysis does not require identifying specific customers, only trends and patterns.
- The data is used internally and does not leave the organization's secure environment.
- Analytical models can work with obfuscated or altered data without impacting accuracy.

Field Name	Mask Method	Assumptions and Explanation
CustID	Substitution	Maintain unique identifiers for analysis while ensuring they are non-identifiable to protect PII in compliance with GDPR and PIPEDA.
Credit Card Number	Full Masking	Sensitive financial information is not required for analytical purposes, ensuring compliance with PCI DSS.
Month	None	Not sensitive, useful for trend analysis. This data does not fall under PII regulations.
Credit Card Balance	Number Variance	Obfuscate exact values while maintaining data distribution for analysis, ensuring data utility while protecting financial information under GDPR and PIPEDA.
Customer Name	Full Masking	Directly identifiable information is not needed for analytics, protecting PII under GDPR and CCPA.
Fin Advisor ID	None	Not sensitive if usage remains internal only.
Mortgage #	Full Masking	Sensitive information not needed for analytical purposes, ensuring compliance with financial data protection regulations such as GLBA.
Mortgage Balance	Number Variance	Preserve data distribution for analysis while protecting exact values under GDPR and SOX.

Scenario 2: Customer Contact Center

Here, customer service agents are contacting clients who are 0-30 days delinquent on their credit card payments. The goal is to provide assistance and reminders while ensuring that the agents have enough information to verify customer identities and discuss account details. Assumptions:

- Agents need enough information to verify customer identity and discuss account status.
- Full credit card numbers and mortgage numbers are not required for early delinquency calls.
- Customer interactions are recorded and must comply with GDPR and PIPEDA for data protection.

Field Name	Mask Method	Assumptions and Explanation
CustID	None	Needed to identify and interact with customers, necessary for customer service operations.
Credit Card Number	Partial Masking (show last 4 digits)	Allows verification of account without exposing full card number, ensuring compliance with PCI DSS.
Month	None	Relevant for understanding transaction timings, not sensitive under PII regulations.
Credit Card Balance	None	Required for discussing financial status with clients, necessary for effective customer service.
Customer Name	None	Essential for personalized customer interaction, required for effective customer service.
Fin Advisor ID	None	Needed for internal tracking and accountability, ensuring internal process efficiency. Full name of the advisor is used to enhance customer service.
Mortgage #	Full Masking	Not relevant for early delinquency discussions, protecting sensitive financial information under GLBA.
Mortgage Balance	None	Important for understanding the overall financial situation of the customer, necessary for effective customer service.

Scenario 3: Integration to Third-Party

In this scenario, the organization is sharing customer data with a third-party vendor for risk assessment. The vendor will evaluate clients' risk levels and offer corresponding rates via API calls (or a similar server-to-server communication method). Assumptions:

- The third-party does not contact customers directly and therefore doesn't need sensitive information like customer name.
- Values for balance can vary by a small amount (up to 5%) without affecting risk assessment.
- The third-party adheres to data protection regulations such as GDPR, PIPEDA, and GLBA.

Field Name	Mask Method	Assumptions and Explanation
CustID	Substitution	Maintain uniqueness for tracking without revealing actual IDs, protecting PII under GDPR and PIPEDA.
Credit Card Number	Full Masking	Third-party does not need this sensitive information, ensuring compliance with PCI DSS.
Month	None	Useful for understanding transaction timelines, not sensitive under PII regulations.
Credit Card Balance	Number Variance (small amount e.g. 5%)	Obfuscate exact values while providing useful financial data for risk assessment, protecting financial information under GDPR and PIPEDA.
Customer Name	Full Masking	Protects identity while sharing data with third-party, ensuring compliance with GDPR and CCPA.
Fin Advisor ID	Full Masking	Not needed to assess the risk rating of the customer. Contacting the financial advisor for high risk customers can be done in a post-processing phase that is internal only.
Mortgage #	Full Masking	Not needed for risk assessment, ensuring compliance with GLBA and protecting sensitive financial information.
Mortgage Balance	Number Variance (small amount e.g. 5%)	Provide useful financial data without exposing exact amounts, ensuring data utility while protecting financial information under GDPR and SOX.