EDA Report

Experiment: eda

Generated: 2026-01-28 19:42:39

Overview - Metrics

- rows: 5000
- rows_original: 60000
- columns: 19
- data_path: ./data/synthetic_bank_aml_200k_test.csv
- duplicate_ratio: 0.0
- numeric_columns: txn_amount, account_age_days, kyc_risk_score, num_txn_24h, avg_amount_7d, is_pep,
- sanctions_match, is_cross_border, is_fintech_rail, origin_country_code, destination_country_code,
- ip_country_code, currency_code, txn_channel_code, payment_rail_code, txn_type_code, merchant_category_code,
- device_type_code, is_suspicious
- categorical_columns:
- datetime_columns:
- text_columns:
- boolean_columns:
- other_columns:
- unique_counts.txn_amount: 4681
- unique_counts.account_age_days: 2728
- unique_counts.kyc_risk_score: 3333
- unique_counts.num_txn_24h: 70
- unique_counts.avg_amount_7d: 3809
- unique_counts.is_pep: 2
- unique_counts.sanctions_match: 2
- unique_counts.is_cross_border: 2
- unique_counts.is_fintech_rail: 2
- unique_counts.origin_country_code: 18
- unique_counts.destination_country_code: 18
- unique_counts.ip_country_code: 18
- unique_counts.currency_code: 14
- unique_counts.txn_channel_code: 5
- unique_counts.payment_rail_code: 14
- unique_counts.txn_type_code: 8
- unique_counts.merchant_category_code: 10
- unique_counts.device_type_code: 4
- unique_counts.is_suspicious: 2
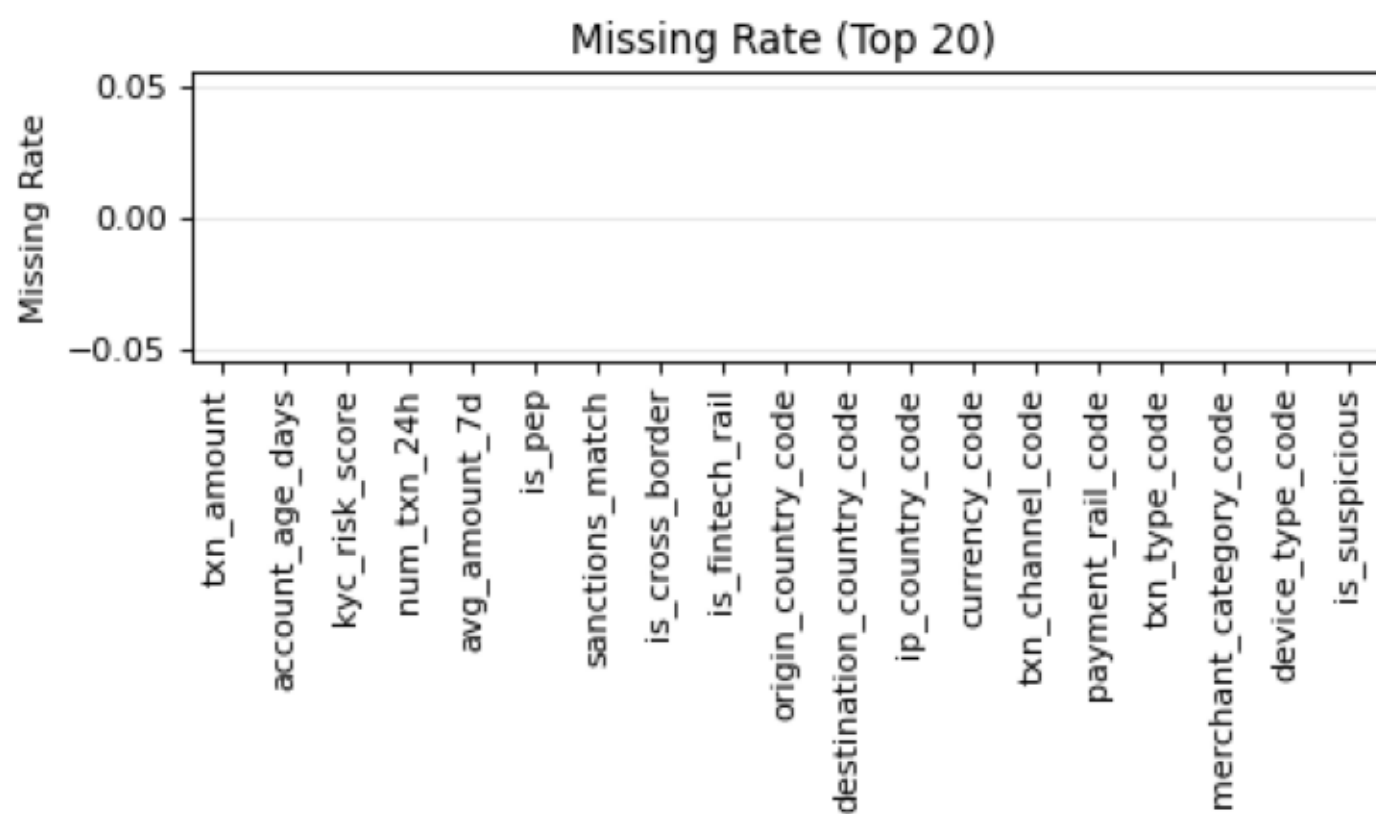
Overview - Explanation

- Dataset has 5000 rows and 19 columns.
- Rows limited to first 5000 of 60000 for analysis.
- Duplicate row ratio is 0.00%.
- Numeric columns: ['txn_amount', 'account_age_days', 'kyc_risk_score', 'num_txn_24h', 'avg_amount_7d',
- 'is_pep', 'sanctions_match', 'is_cross_border', 'is_fintech_rail', 'origin_country_code',
- 'destination_country_code', 'ip_country_code', 'currency_code', 'txn_channel_code', 'payment_rail_code',
- 'txn_type_code', 'merchant_category_code', 'device_type_code', 'is_suspicious'].
- Categorical columns: [].
- Target 'is_suspicious' distribution: {0: 4724, 1: 276}.

Missingness - Metrics

- missing_rate.txn_amount: 0.0
- missing_rate.account_age_days: 0.0
- missing_rate.kyc_risk_score: 0.0
- missing_rate.num_txn_24h: 0.0
- missing_rate.avg_amount_7d: 0.0
- missing_rate.is_pep: 0.0
- missing_rate.sanctions_match: 0.0
- missing_rate.is_cross_border: 0.0
- missing_rate.is_fintech_rail: 0.0
- missing_rate.origin_country_code: 0.0
- missing_rate.destination_country_code: 0.0
- missing_rate.ip_country_code: 0.0
- missing_rate.currency_code: 0.0
- missing_rate.txn_channel_code: 0.0
- missing_rate.payment_rail_code: 0.0
- missing_rate.txn_type_code: 0.0
- missing_rate.merchant_category_code: 0.0
- missing_rate.device_type_code: 0.0
- missing_rate.is_suspicious: 0.0

Missingness - Explanation

- Highest missing rate is 0.00% in column 'txn_amount'.
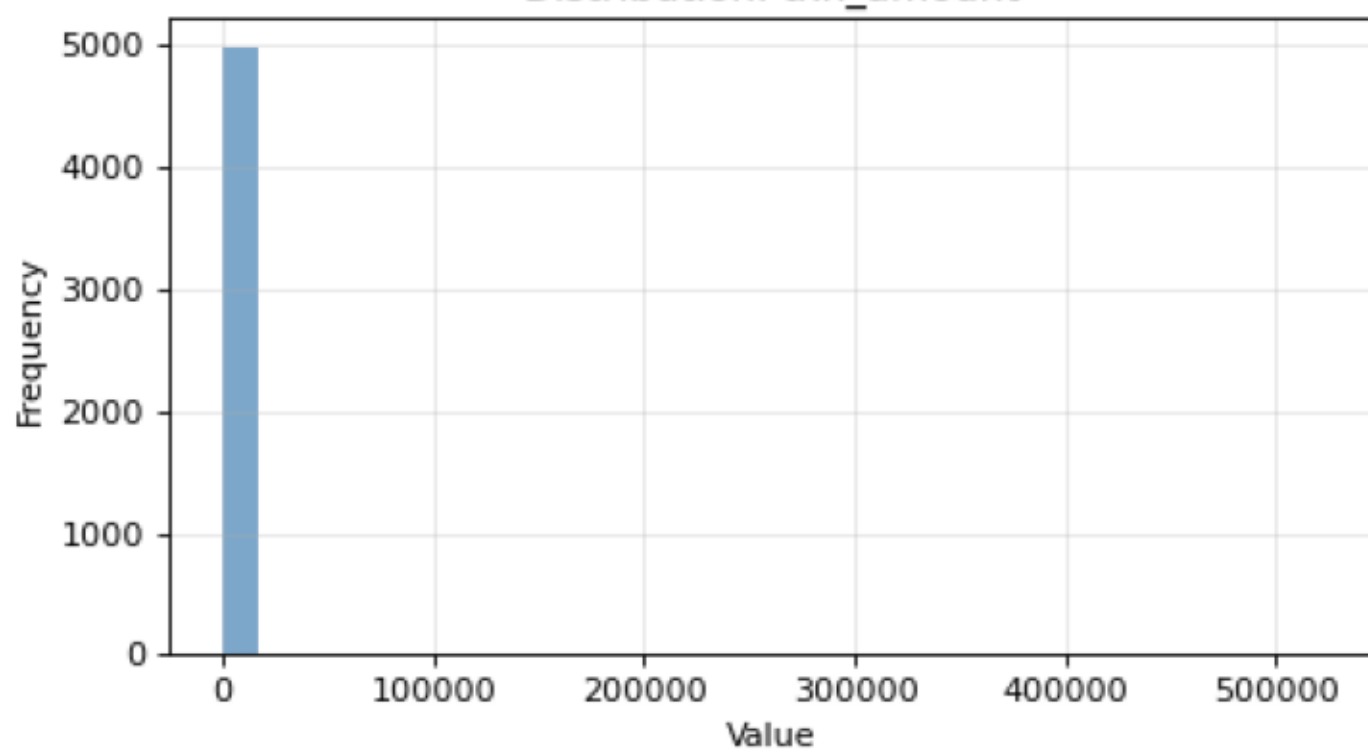
Missing Rate (Top 20)

Numeric - Metrics

- numeric_stats.txn_amount.count: 5000.0
- numeric_stats.txn_amount.mean: 953.060174
- numeric_stats.txn_amount.std: 11086.013939
- numeric_stats.txn_amount.min: 1.26
- numeric_stats.txn_amount.25%: 40.38
- numeric_stats.txn_amount.50%: 106.835
- numeric_stats.txn_amount.75%: 320.29
- numeric_stats.txn_amount.max: 520073.9
- numeric_stats.account_age_days.count: 5000.0
- numeric_stats.account_age_days.mean: 1840.5152
- numeric_stats.account_age_days.std: 1046.055188
- numeric_stats.account_age_days.min: 1.0
- numeric_stats.account_age_days.25%: 938.0
- numeric_stats.account_age_days.50%: 1865.0
- numeric_stats.account_age_days.75%: 2736.25
- numeric_stats.account_age_days.max: 3648.0
- numeric_stats.avg_amount_7d.count: 5000.0
- numeric_stats.avg_amount_7d.mean: 45.126398
- numeric_stats.avg_amount_7d.std: 41.659436
- numeric_stats.avg_amount_7d.min: 1.77
- numeric_stats.avg_amount_7d.25%: 19.36
- numeric_stats.avg_amount_7d.50%: 33.3
- numeric_stats.avg_amount_7d.75%: 56.3125
- numeric_stats.avg_amount_7d.max: 653.95
- numeric_stats.kyc_risk_score.count: 5000.0
- numeric_stats.kyc_risk_score.mean: 36.663866
- numeric_stats.kyc_risk_score.std: 17.053069
- numeric_stats.kyc_risk_score.min: 0.0
- numeric_stats.kyc_risk_score.25%: 25.36
- numeric_stats.kyc_risk_score.50%: 35.585
- numeric_stats.kyc_risk_score.75%: 46.7425
- numeric_stats.kyc_risk_score.max: 100.0
- numeric_stats.num_txn_24h.count: 5000.0
- numeric_stats.num_txn_24h.mean: 3.2762
- numeric_stats.num_txn_24h.std: 7.605122
- numeric_stats.num_txn_24h.min: 0.0
- numeric_stats.num_txn_24h.25%: 1.0
- numeric_stats.num_txn_24h.50%: 2.0
- numeric_stats.num_txn_24h.75%: 3.0
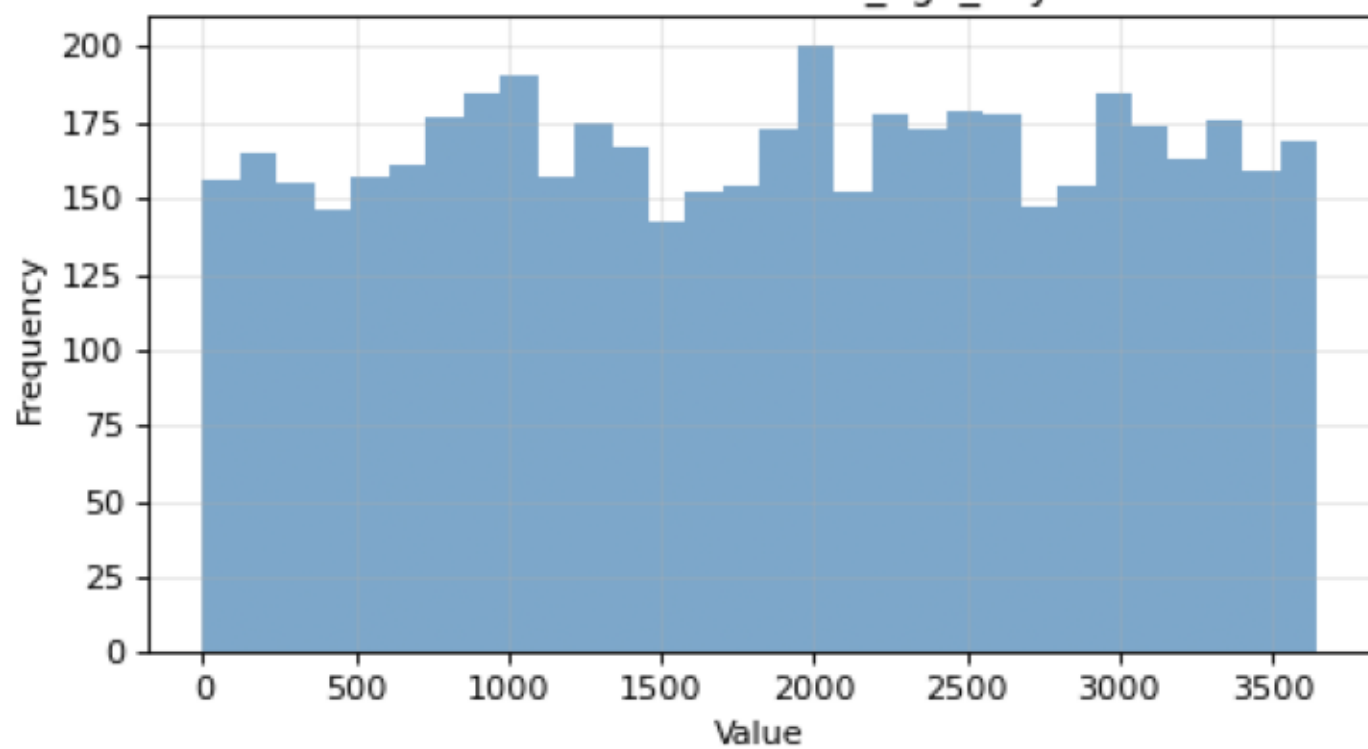- numeric_stats.num_txn_24h.max: 81.0

Numeric - Explanation

- Numeric columns analyzed (top 5 by variance): ['txn_amount', 'account_age_days', 'avg_amount_7d',
- 'kyc_risk_score', 'num_txn_24h'].

- Numeric columns analyzed (top 5 by variance): ['txn_amount', 'account_age_days', 'avg_amount_7d',
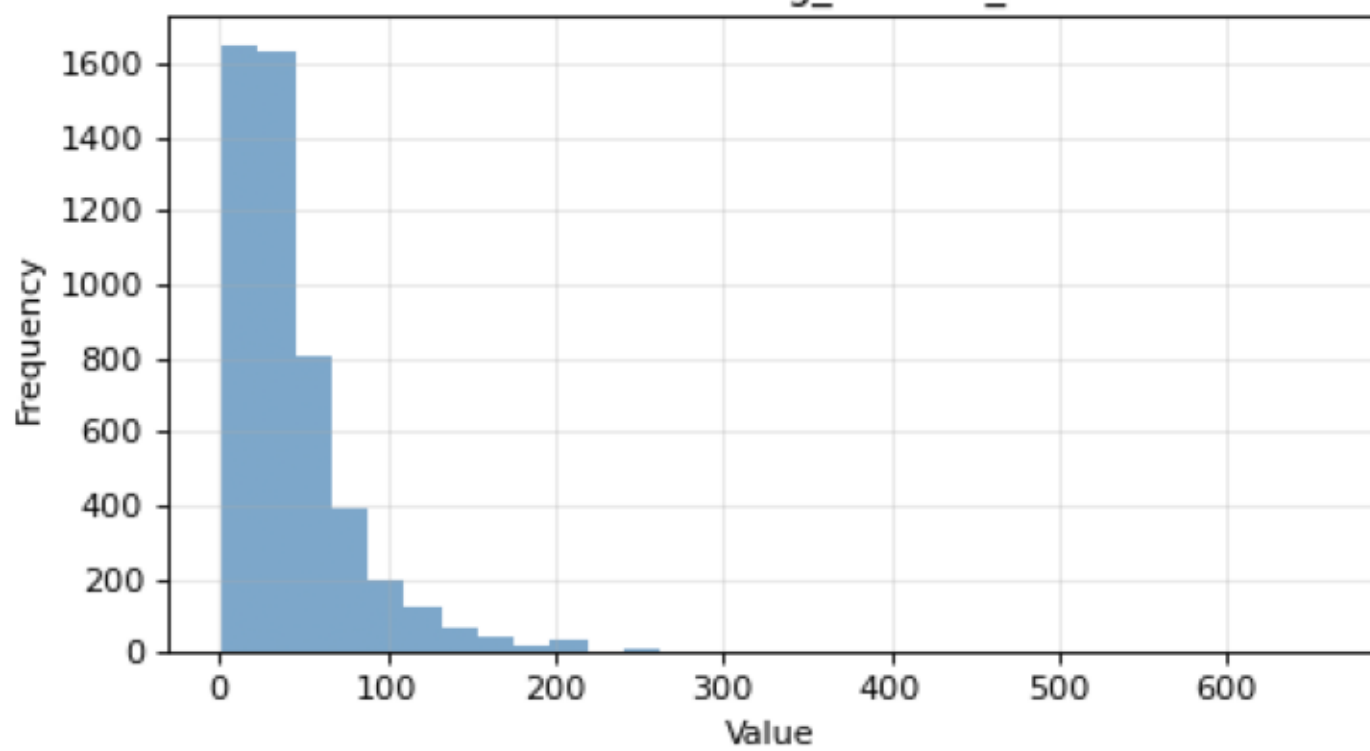- 'kyc_risk_score', 'num_txn_24h'].
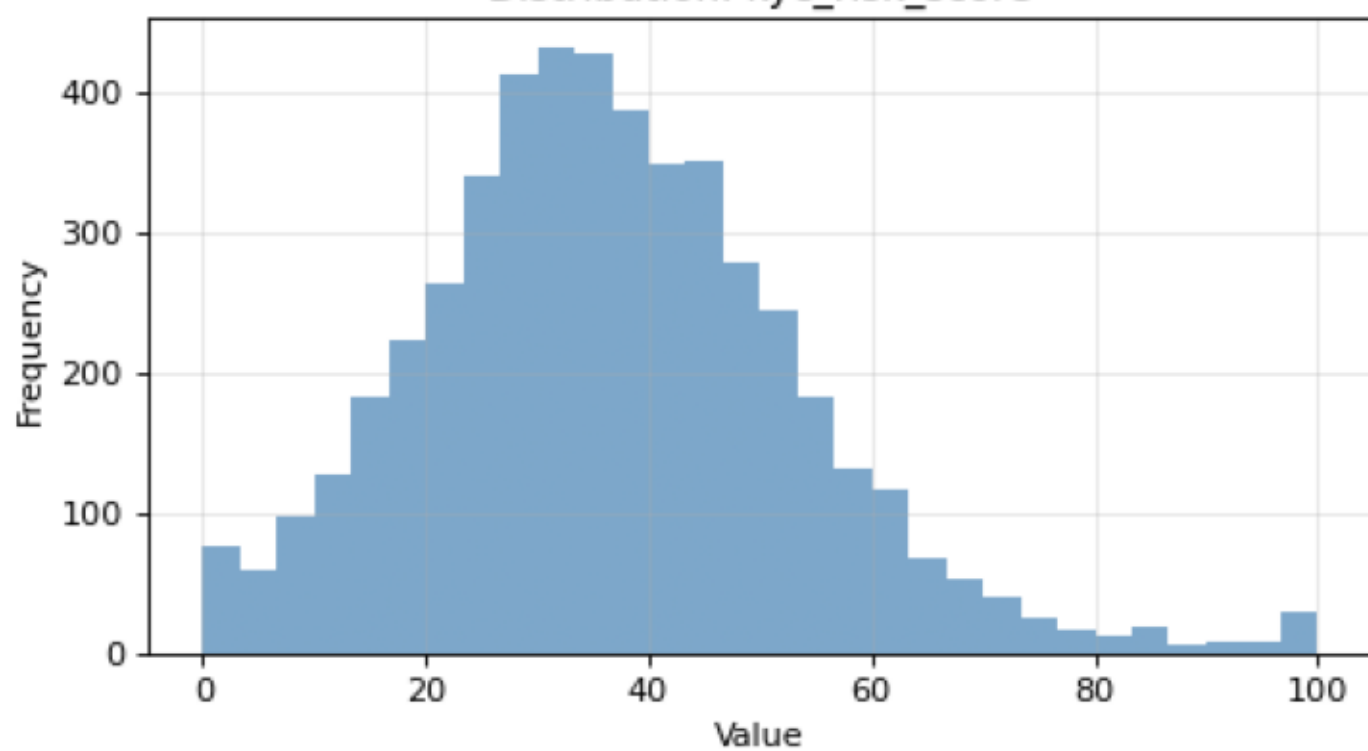
Distribution: txn_amount
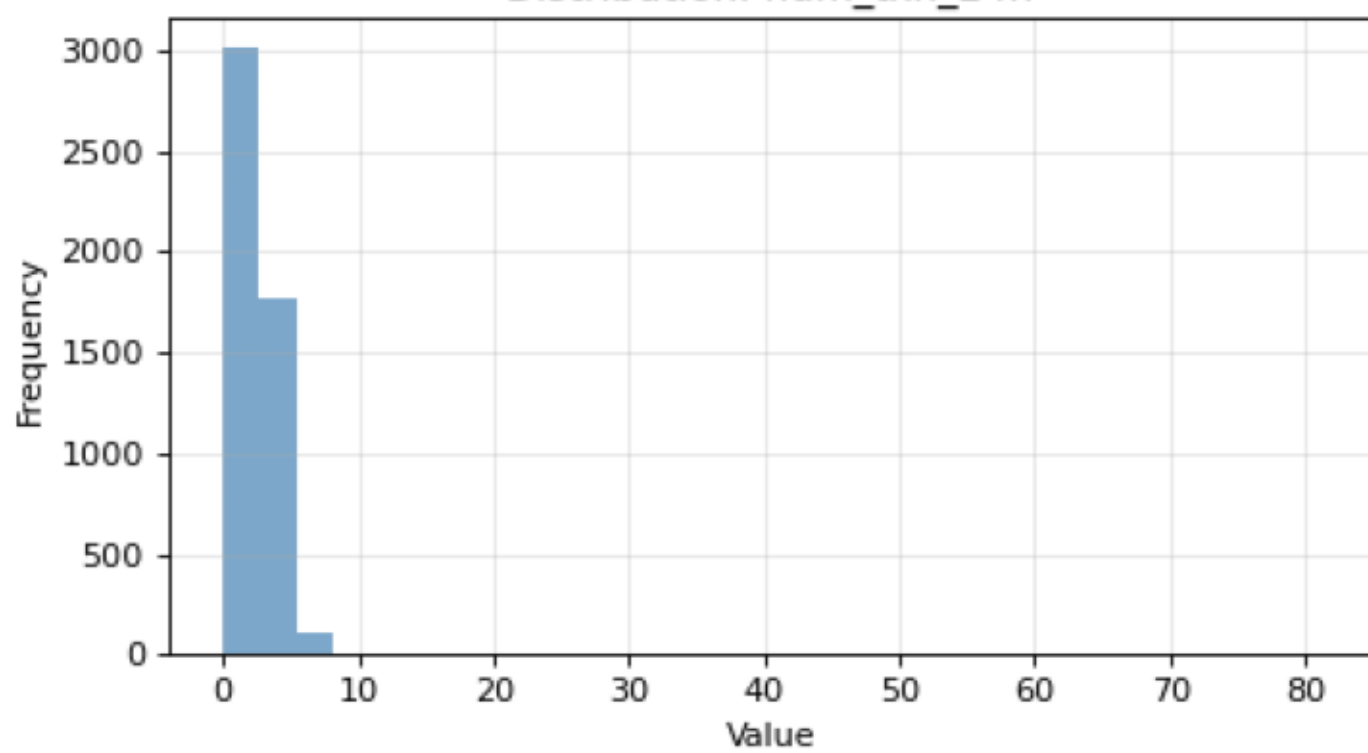
Distribution: account_age_days

Distribution: avg_amount_7d

Distribution: kyc_risk_score

Distribution: num_txn_24h

Categorical - Explanation

- No categorical columns found.

Correlation - Metrics

- correlation.txn_amount.txn_amount: 1.0
- correlation.txn_amount.account_age_days: 0.0009
- correlation.txn_amount.kyc_risk_score: 0.069
- correlation.txn_amount.num_txn_24h: 0.0497
- correlation.txn_amount.avg_amount_7d: -0.0158
- correlation.txn_amount.is_pep: 0.0263
- correlation.txn_amount.sanctions_match: 0.0375
- correlation.txn_amount.is_cross_border: 0.0091
- correlation.txn_amount.is_fintech_rail: -0.026
- correlation.txn_amount.origin_country_code: 0.0127
- correlation.txn_amount.destination_country_code: 0.0155
- correlation.txn_amount.ip_country_code: -0.001
- correlation.txn_amount.currency_code: 0.0168
- correlation.txn_amount.txn_channel_code: 0.0063
- correlation.txn_amount.payment_rail_code: -0.0207
- correlation.txn_amount.txn_type_code: 0.0137
- correlation.txn_amount.merchant_category_code: -0.0144
- correlation.txn_amount.device_type_code: -0.0204
- correlation.txn_amount.is_suspicious: 0.0956
- correlation.account_age_days.txn_amount: 0.0009
- correlation.account_age_days.account_age_days: 1.0
- correlation.account_age_days.kyc_risk_score: -0.004
- correlation.account_age_days.num_txn_24h: -0.0083
- correlation.account_age_days.avg_amount_7d: 0.016
- correlation.account_age_days.is_pep: -0.0046
- correlation.account_age_days.sanctions_match: -0.0278
- correlation.account_age_days.is_cross_border: 0.0207
- correlation.account_age_days.is_fintech_rail: 0.038
- correlation.account_age_days.origin_country_code: 0.0224
- correlation.account_age_days.destination_country_code: 0.0305
- correlation.account_age_days.ip_country_code: 0.0163
- correlation.account_age_days.currency_code: -0.015
- correlation.account_age_days.txn_channel_code: -0.0059
- correlation.account_age_days.payment_rail_code: 0.0398
- correlation.account_age_days.txn_type_code: 0.0005
- correlation.account_age_days.merchant_category_code: 0.0169
- correlation.account_age_days.device_type_code: 0.0004
- correlation.account_age_days.is_suspicious: -0.0046
- correlation.kyc_risk_score.txn_amount: 0.069
- correlation.kyc_risk_score.account_age_days: -0.004
- correlation.kyc_risk_score.kyc_risk_score: 1.0
- correlation.kyc_risk_score.num_txn_24h: 0.3105
- correlation.kyc_risk_score.avg_amount_7d: -0.0199
- correlation.kyc_risk_score.is_pep: 0.1932
- correlation.kyc_risk_score.sanctions_match: 0.1804
- correlation.kyc_risk_score.is_cross_border: 0.0283

Correlation - Metrics

- correlation.kyc_risk_score.is_fintech_rail: 0.0602
- correlation.kyc_risk_score.origin_country_code: 0.0545
- correlation.kyc_risk_score.destination_country_code: 0.0632
- correlation.kyc_risk_score.ip_country_code: 0.0067
- correlation.kyc_risk_score.currency_code: -0.0074
- correlation.kyc_risk_score.txn_channel_code: 0.0542
- correlation.kyc_risk_score.payment_rail_code: 0.0604
- correlation.kyc_risk_score.txn_type_code: 0.0187
- correlation.kyc_risk_score.merchant_category_code: -0.0075
- correlation.kyc_risk_score.device_type_code: -0.0244
- correlation.kyc_risk_score.is_suspicious: 0.3794
- correlation.num_txn_24h.txn_amount: 0.0497
- correlation.num_txn_24h.account_age_days: -0.0083
- correlation.num_txn_24h.kyc_risk_score: 0.3105
- correlation.num_txn_24h.num_txn_24h: 1.0
- correlation.num_txn_24h.avg_amount_7d: -0.0092
- correlation.num_txn_24h.is_pep: 0.3267
- correlation.num_txn_24h.sanctions_match: 0.3205
- correlation.num_txn_24h.is_cross_border: 0.0097
- correlation.num_txn_24h.is_fintech_rail: 0.0909
- correlation.num_txn_24h.origin_country_code: 0.1026
- correlation.num_txn_24h.destination_country_code: 0.0817
- correlation.num_txn_24h.ip_country_code: -0.0207
- correlation.num_txn_24h.currency_code: 0.019
- correlation.num_txn_24h.txn_channel_code: 0.0267
- correlation.num_txn_24h.payment_rail_code: 0.0885
- correlation.num_txn_24h.txn_type_code: 0.0123
- correlation.num_txn_24h.merchant_category_code: -0.0008
- correlation.num_txn_24h.device_type_code: -0.0053
- correlation.num_txn_24h.is_suspicious: 0.572
- correlation.avg_amount_7d.txn_amount: -0.0158
- correlation.avg_amount_7d.account_age_days: 0.016
- correlation.avg_amount_7d.kyc_risk_score: -0.0199
- correlation.avg_amount_7d.num_txn_24h: -0.0092
- correlation.avg_amount_7d.avg_amount_7d: 1.0
- correlation.avg_amount_7d.is_pep: -0.0238
- correlation.avg_amount_7d.sanctions_match: -0.0078
- correlation.avg_amount_7d.is_cross_border: -0.0022
- correlation.avg_amount_7d.is_fintech_rail: -0.0125
- correlation.avg_amount_7d.origin_country_code: -0.0022
- correlation.avg_amount_7d.destination_country_code: -0.0023
- correlation.avg_amount_7d.ip_country_code: 0.0293
- correlation.avg_amount_7d.currency_code: 0.0031
- correlation.avg_amount_7d.txn_channel_code: 0.0086
- correlation.avg_amount_7d.payment_rail_code: -0.0091
- correlation.avg_amount_7d.txn_type_code: -0.0266

Correlation - Metrics

- correlation.avg_amount_7d.merchant_category_code: 0.0049
- correlation.avg_amount_7d.device_type_code: -0.0005
- correlation.avg_amount_7d.is_suspicious: -0.0024
- correlation.is_pep.txn_amount: 0.0263
- correlation.is_pep.account_age_days: -0.0046
- correlation.is_pep.kyc_risk_score: 0.1932
- correlation.is_pep.num_txn_24h: 0.3267
- correlation.is_pep.avg_amount_7d: -0.0238
- correlation.is_pep.is_pep: 1.0
- correlation.is_pep.sanctions_match: 0.1868
- correlation.is_pep.is_cross_border: -0.0141
- correlation.is_pep.is_fintech_rail: 0.0735
- correlation.is_pep.origin_country_code: 0.0557
- correlation.is_pep.destination_country_code: 0.0786
- correlation.is_pep.ip_country_code: 0.0008
- correlation.is_pep.currency_code: -0.0115
- correlation.is_pep.txn_channel_code: 0.013
- correlation.is_pep.payment_rail_code: 0.0679
- correlation.is_pep.txn_type_code: 0.0191
- correlation.is_pep.merchant_category_code: 0.0035
- correlation.is_pep.device_type_code: -0.0076
- correlation.is_pep.is_suspicious: 0.389
- correlation.sanctions_match.txn_amount: 0.0375
- correlation.sanctions_match.account_age_days: -0.0278
- correlation.sanctions_match.kyc_risk_score: 0.1804
- correlation.sanctions_match.num_txn_24h: 0.3205
- correlation.sanctions_match.avg_amount_7d: -0.0078
- correlation.sanctions_match.is_pep: 0.1868
- correlation.sanctions_match.sanctions_match: 1.0
- correlation.sanctions_match.is_cross_border: 0.0003
- correlation.sanctions_match.is_fintech_rail: 0.0492
- correlation.sanctions_match.origin_country_code: 0.0621
- correlation.sanctions_match.destination_country_code: 0.0656
- correlation.sanctions_match.ip_country_code: -0.0011
- correlation.sanctions_match.currency_code: 0.0181
- correlation.sanctions_match.txn_channel_code: 0.0103
- correlation.sanctions_match.payment_rail_code: 0.0413
- correlation.sanctions_match.txn_type_code: 0.0178
- correlation.sanctions_match.merchant_category_code: 0.019
- correlation.sanctions_match.device_type_code: -0.0099
- correlation.sanctions_match.is_suspicious: 0.3069
- correlation.is_cross_border.txn_amount: 0.0091
- correlation.is_cross_border.account_age_days: 0.0207
- correlation.is_cross_border.kyc_risk_score: 0.0283
- correlation.is_cross_border.num_txn_24h: 0.0097
- correlation.is_cross_border.avg_amount_7d: -0.0022

Correlation - Metrics

- correlation.is_cross_border.is_pep: -0.0141
- correlation.is_cross_border.sanctions_match: 0.0003
- correlation.is_cross_border.is_cross_border: 1.0
- correlation.is_cross_border.is_fintech_rail: -0.0265
- correlation.is_cross_border.origin_country_code: 0.2307
- correlation.is_cross_border.destination_country_code: 0.2262
- correlation.is_cross_border.ip_country_code: 0.004
- correlation.is_cross_border.currency_code: -0.2356
- correlation.is_cross_border.txn_channel_code: 0.0152
- correlation.is_cross_border.payment_rail_code: -0.0311
- correlation.is_cross_border.txn_type_code: 0.0186
- correlation.is_cross_border.merchant_category_code: 0.0042
- correlation.is_cross_border.device_type_code: -0.0081
- correlation.is_cross_border.is_suspicious: 0.0121
- correlation.is_fintech_rail.txn_amount: -0.026
- correlation.is_fintech_rail.account_age_days: 0.038
- correlation.is_fintech_rail.kyc_risk_score: 0.0602
- correlation.is_fintech_rail.num_txn_24h: 0.0909
- correlation.is_fintech_rail.avg_amount_7d: -0.0125
- correlation.is_fintech_rail.is_pep: 0.0735
- correlation.is_fintech_rail.sanctions_match: 0.0492
- correlation.is_fintech_rail.is_cross_border: -0.0265
- correlation.is_fintech_rail.is_fintech_rail: 1.0
- correlation.is_fintech_rail.origin_country_code: 0.0081
- correlation.is_fintech_rail.destination_country_code: 0.0201
- correlation.is_fintech_rail.ip_country_code: -0.0054
- correlation.is_fintech_rail.currency_code: 0.0014
- correlation.is_fintech_rail.txn_channel_code: 0.0248
- correlation.is_fintech_rail.payment_rail_code: 0.8674
- correlation.is_fintech_rail.txn_type_code: 0.0158
- correlation.is_fintech_rail.merchant_category_code: 0.0015
- correlation.is_fintech_rail.device_type_code: -0.0064
- correlation.is_fintech_rail.is_suspicious: 0.1305
- correlation.origin_country_code.txn_amount: 0.0127
- correlation.origin_country_code.account_age_days: 0.0224
- correlation.origin_country_code.kyc_risk_score: 0.0545
- correlation.origin_country_code.num_txn_24h: 0.1026
- correlation.origin_country_code.avg_amount_7d: -0.0022
- correlation.origin_country_code.is_pep: 0.0557
- correlation.origin_country_code.sanctions_match: 0.0621
- correlation.origin_country_code.is_cross_border: 0.2307
- correlation.origin_country_code.is_fintech_rail: 0.0081
- correlation.origin_country_code.origin_country_code: 1.0
- correlation.origin_country_code.destination_country_code: 0.0051
- correlation.origin_country_code.ip_country_code: -0.0333
- correlation.origin_country_code.currency_code: -0.347

Correlation - Metrics

- correlation.origin_country_code.txn_channel_code: 0.0123
- correlation.origin_country_code.payment_rail_code: 0.0122
- correlation.origin_country_code.txn_type_code: -0.021
- correlation.origin_country_code.merchant_category_code: 0.0107
- correlation.origin_country_code.device_type_code: -0.0145
- correlation.origin_country_code.is_suspicious: 0.104
- correlation.destination_country_code.txn_amount: 0.0155
- correlation.destination_country_code.account_age_days: 0.0305
- correlation.destination_country_code.kyc_risk_score: 0.0632
- correlation.destination_country_code.num_txn_24h: 0.0817
- correlation.destination_country_code.avg_amount_7d: -0.0023
- correlation.destination_country_code.is_pep: 0.0786
- correlation.destination_country_code.sanctions_match: 0.0656
- correlation.destination_country_code.is_cross_border: 0.2262
- correlation.destination_country_code.is_fintech_rail: 0.0201
- correlation.destination_country_code.origin_country_code: 0.0051
- correlation.destination_country_code.destination_country_code: 1.0
- correlation.destination_country_code.ip_country_code: 0.0147
- correlation.destination_country_code.currency_code: 0.0051
- correlation.destination_country_code.txn_channel_code: 0.0157
- correlation.destination_country_code.payment_rail_code: 0.0111
- correlation.destination_country_code.txn_type_code: 0.0333
- correlation.destination_country_code.merchant_category_code: -0.0097
- correlation.destination_country_code.device_type_code: -0.0166
- correlation.destination_country_code.is_suspicious: 0.111
- correlation.ip_country_code.txn_amount: -0.001
- correlation.ip_country_code.account_age_days: 0.0163
- correlation.ip_country_code.kyc_risk_score: 0.0067
- correlation.ip_country_code.num_txn_24h: -0.0207
- correlation.ip_country_code.avg_amount_7d: 0.0293
- correlation.ip_country_code.is_pep: 0.0008
- correlation.ip_country_code.sanctions_match: -0.0011
- correlation.ip_country_code.is_cross_border: 0.004
- correlation.ip_country_code.is_fintech_rail: -0.0054
- correlation.ip_country_code.origin_country_code: -0.0333
- correlation.ip_country_code.destination_country_code: 0.0147
- correlation.ip_country_code.ip_country_code: 1.0
- correlation.ip_country_code.currency_code: 0.0038
- correlation.ip_country_code.txn_channel_code: -0.0031
- correlation.ip_country_code.payment_rail_code: -0.0115
- correlation.ip_country_code.txn_type_code: 0.0152
- correlation.ip_country_code.merchant_category_code: -0.0071
- correlation.ip_country_code.device_type_code: 0.0112
- correlation.ip_country_code.is_suspicious: -0.0172
- correlation.currency_code.txn_amount: 0.0168
- correlation.currency_code.account_age_days: -0.015

Correlation - Metrics

- correlation.currency_code.kyc_risk_score: -0.0074
- correlation.currency_code.num_txn_24h: 0.019
- correlation.currency_code.avg_amount_7d: 0.0031
- correlation.currency_code.is_pep: -0.0115
- correlation.currency_code.sanctions_match: 0.0181
- correlation.currency_code.is_cross_border: -0.2356
- correlation.currency_code.is_fintech_rail: 0.0014
- correlation.currency_code.origin_country_code: -0.347
- correlation.currency_code.destination_country_code: 0.0051
- correlation.currency_code.ip_country_code: 0.0038
- correlation.currency_code.currency_code: 1.0
- correlation.currency_code.txn_channel_code: -0.0003
- correlation.currency_code.payment_rail_code: 0.0135
- correlation.currency_code.txn_type_code: 0.0204
- correlation.currency_code.merchant_category_code: -0.005
- correlation.currency_code.device_type_code: 0.02
- correlation.currency_code.is_suspicious: 0.0098
- correlation.txn_channel_code.txn_amount: 0.0063
- correlation.txn_channel_code.account_age_days: -0.0059
- correlation.txn_channel_code.kyc_risk_score: 0.0542
- correlation.txn_channel_code.num_txn_24h: 0.0267
- correlation.txn_channel_code.avg_amount_7d: 0.0086
- correlation.txn_channel_code.is_pep: 0.013
- correlation.txn_channel_code.sanctions_match: 0.0103
- correlation.txn_channel_code.is_cross_border: 0.0152
- correlation.txn_channel_code.is_fintech_rail: 0.0248
- correlation.txn_channel_code.origin_country_code: 0.0123
- correlation.txn_channel_code.destination_country_code: 0.0157
- correlation.txn_channel_code.ip_country_code: -0.0031
- correlation.txn_channel_code.currency_code: -0.0003
- correlation.txn_channel_code.txn_channel_code: 1.0
- correlation.txn_channel_code.payment_rail_code: 0.0206
- correlation.txn_channel_code.txn_type_code: -0.0186
- correlation.txn_channel_code.merchant_category_code: -0.0174
- correlation.txn_channel_code.device_type_code: -0.0048
- correlation.txn_channel_code.is_suspicious: 0.0503
- correlation.payment_rail_code.txn_amount: -0.0207
- correlation.payment_rail_code.account_age_days: 0.0398
- correlation.payment_rail_code.kyc_risk_score: 0.0604
- correlation.payment_rail_code.num_txn_24h: 0.0885
- correlation.payment_rail_code.avg_amount_7d: -0.0091
- correlation.payment_rail_code.is_pep: 0.0679
- correlation.payment_rail_code.sanctions_match: 0.0413
- correlation.payment_rail_code.is_cross_border: -0.0311
- correlation.payment_rail_code.is_fintech_rail: 0.8674
- correlation.payment_rail_code.origin_country_code: 0.0122

Correlation - Metrics

- correlation.payment_rail_code.destination_country_code: 0.0111
- correlation.payment_rail_code.ip_country_code: -0.0115
- correlation.payment_rail_code.currency_code: 0.0135
- correlation.payment_rail_code.txn_channel_code: 0.0206
- correlation.payment_rail_code.payment_rail_code: 1.0
- correlation.payment_rail_code.txn_type_code: 0.0237
- correlation.payment_rail_code.merchant_category_code: -0.0005
- correlation.payment_rail_code.device_type_code: -0.0088
- correlation.payment_rail_code.is_suspicious: 0.1244
- correlation.txn_type_code.txn_amount: 0.0137
- correlation.txn_type_code.account_age_days: 0.0005
- correlation.txn_type_code.kyc_risk_score: 0.0187
- correlation.txn_type_code.num_txn_24h: 0.0123
- correlation.txn_type_code.avg_amount_7d: -0.0266
- correlation.txn_type_code.is_pep: 0.0191
- correlation.txn_type_code.sanctions_match: 0.0178
- correlation.txn_type_code.is_cross_border: 0.0186
- correlation.txn_type_code.is_fintech_rail: 0.0158
- correlation.txn_type_code.origin_country_code: -0.021
- correlation.txn_type_code.destination_country_code: 0.0333
- correlation.txn_type_code.ip_country_code: 0.0152
- correlation.txn_type_code.currency_code: 0.0204
- correlation.txn_type_code.txn_channel_code: -0.0186
- correlation.txn_type_code.payment_rail_code: 0.0237
- correlation.txn_type_code.txn_type_code: 1.0
- correlation.txn_type_code.merchant_category_code: -0.0054
- correlation.txn_type_code.device_type_code: -0.0098
- correlation.txn_type_code.is_suspicious: 0.0091
- correlation.merchant_category_code.txn_amount: -0.0144
- correlation.merchant_category_code.account_age_days: 0.0169
- correlation.merchant_category_code.kyc_risk_score: -0.0075
- correlation.merchant_category_code.num_txn_24h: -0.0008
- correlation.merchant_category_code.avg_amount_7d: 0.0049
- correlation.merchant_category_code.is_pep: 0.0035
- correlation.merchant_category_code.sanctions_match: 0.019
- correlation.merchant_category_code.is_cross_border: 0.0042
- correlation.merchant_category_code.is_fintech_rail: 0.0015
- correlation.merchant_category_code.origin_country_code: 0.0107
- correlation.merchant_category_code.destination_country_code: -0.0097
- correlation.merchant_category_code.ip_country_code: -0.0071
- correlation.merchant_category_code.currency_code: -0.005
- correlation.merchant_category_code.txn_channel_code: -0.0174
- correlation.merchant_category_code.payment_rail_code: -0.0005
- correlation.merchant_category_code.txn_type_code: -0.0054
- correlation.merchant_category_code.merchant_category_code: 1.0
- correlation.merchant_category_code.device_type_code: -0.0109

Correlation - Metrics

- correlation.merchant_category_code.is_suspicious: 0.0109
- correlation.device_type_code.txn_amount: -0.0204
- correlation.device_type_code.account_age_days: 0.0004
- correlation.device_type_code.kyc_risk_score: -0.0244
- correlation.device_type_code.num_txn_24h: -0.0053
- correlation.device_type_code.avg_amount_7d: -0.0005
- correlation.device_type_code.is_pep: -0.0076
- correlation.device_type_code.sanctions_match: -0.0099
- correlation.device_type_code.is_cross_border: -0.0081
- correlation.device_type_code.is_fintech_rail: -0.0064
- correlation.device_type_code.origin_country_code: -0.0145
- correlation.device_type_code.destination_country_code: -0.0166
- correlation.device_type_code.ip_country_code: 0.0112
- correlation.device_type_code.currency_code: 0.02
- correlation.device_type_code.txn_channel_code: -0.0048
- correlation.device_type_code.payment_rail_code: -0.0088
- correlation.device_type_code.txn_type_code: -0.0098
- correlation.device_type_code.merchant_category_code: -0.0109
- correlation.device_type_code.device_type_code: 1.0
- correlation.device_type_code.is_suspicious: -0.0249
- correlation.is_suspicious.txn_amount: 0.0956
- correlation.is_suspicious.account_age_days: -0.0046
- correlation.is_suspicious.kyc_risk_score: 0.3794
- correlation.is_suspicious.num_txn_24h: 0.572
- correlation.is_suspicious.avg_amount_7d: -0.0024
- correlation.is_suspicious.is_pep: 0.389
- correlation.is_suspicious.sanctions_match: 0.3069
- correlation.is_suspicious.is_cross_border: 0.0121
- correlation.is_suspicious.is_fintech_rail: 0.1305
- correlation.is_suspicious.origin_country_code: 0.104
- correlation.is_suspicious.destination_country_code: 0.111
- correlation.is_suspicious.ip_country_code: -0.0172
- correlation.is_suspicious.currency_code: 0.0098
- correlation.is_suspicious.txn_channel_code: 0.0503
- correlation.is_suspicious.payment_rail_code: 0.1244
- correlation.is_suspicious.txn_type_code: 0.0091
- correlation.is_suspicious.merchant_category_code: 0.0109
- correlation.is_suspicious.device_type_code: -0.0249
- correlation.is_suspicious.is_suspicious: 1.0
- target_correlation.is_suspicious: 1.0
- target_correlation.num_txn_24h: 0.572
- target_correlation.is_pep: 0.389
- target_correlation.kyc_risk_score: 0.3794
- target_correlation.sanctions_match: 0.3069
- target_correlation.is_fintech_rail: 0.1305
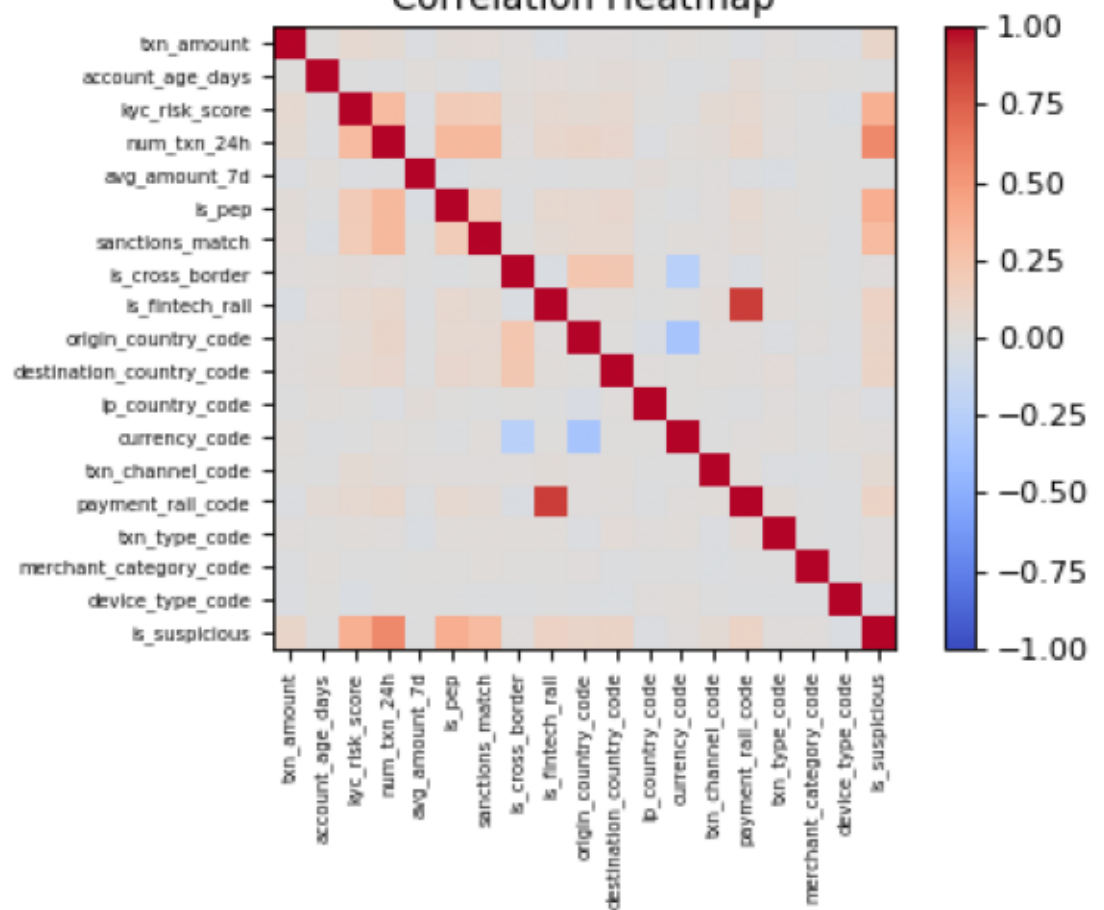- target_correlation.payment_rail_code: 0.1244

Correlation - Metrics

- target_correlation.destination_country_code: 0.111
- target_correlation.origin_country_code: 0.104
- target_correlation.txn_amount: 0.0956
- target_correlation.txn_channel_code: 0.0503
- target_correlation.is_cross_border: 0.0121
- target_correlation.merchant_category_code: 0.0109
- target_correlation.currency_code: 0.0098
- target_correlation.txn_type_code: 0.0091
- target_correlation.avg_amount_7d: -0.0024
- target_correlation.account_age_days: -0.0046
- target_correlation.ip_country_code: -0.0172
- target_correlation.device_type_code: -0.0249

Correlation - Explanation

- Correlation heatmap shows linear relationships among numeric features.
- Top correlated features with target 'is_suspicious': ['is_suspicious', 'num_txn_24h', 'is_pep',
- 'kyc_risk_score', 'sanctions_match'].

Correlation Heatmap

Target - Metrics

- numeric_mean_by_target.txn_amount.0: 696.8803
- numeric_mean_by_target.txn_amount.1: 5337.8203
- numeric_mean_by_target.account_age_days.0: 1841.6753
- numeric_mean_by_target.account_age_days.1: 1820.6594
- numeric_mean_by_target.kyc_risk_score.0: 35.1003
- numeric_mean_by_target.kyc_risk_score.1: 63.4255
- numeric_mean_by_target.num_txn_24h.0: 2.2248
- numeric_mean_by_target.num_txn_24h.1: 21.2717
- numeric_mean_by_target.avg_amount_7d.0: 45.1505
- numeric_mean_by_target.avg_amount_7d.1: 44.7145
- numeric_mean_by_target.is_pep.0: 0.0125
- numeric_mean_by_target.is_pep.1: 0.2935
- numeric_mean_by_target.sanctions_match.0: 0.0021
- numeric_mean_by_target.sanctions_match.1: 0.1304
- numeric_mean_by_target.is_cross_border.0: 0.8893
- numeric_mean_by_target.is_cross_border.1: 0.9058
- numeric_mean_by_target.is_fintech_rail.0: 0.4062
- numeric_mean_by_target.is_fintech_rail.1: 0.6884
- numeric_mean_by_target.origin_country_code.0: 5.2868
- numeric_mean_by_target.origin_country_code.1: 7.7536
- numeric_mean_by_target.destination_country_code.0: 5.1575
- numeric_mean_by_target.destination_country_code.1: 7.75
- numeric_mean_by_target.ip_country_code.0: 5.1698
- numeric_mean_by_target.ip_country_code.1: 4.7681
- numeric_mean_by_target.currency_code.0: 7.1975
- numeric_mean_by_target.currency_code.1: 7.3841
- numeric_mean_by_target.txn_channel_code.0: 1.0434
- numeric_mean_by_target.txn_channel_code.1: 1.3261
- numeric_mean_by_target.payment_rail_code.0: 4.5381
- numeric_mean_by_target.payment_rail_code.1: 6.6341
- numeric_mean_by_target.txn_type_code.0: 2.4888
- numeric_mean_by_target.txn_type_code.1: 2.5797
- numeric_mean_by_target.merchant_category_code.0: 4.7964
- numeric_mean_by_target.merchant_category_code.1: 4.9493
- numeric_mean_by_target.device_type_code.0: 1.171
- numeric_mean_by_target.device_type_code.1: 1.0652

Target - Explanation

- Target 'is_suspicious' appears categorical with classes: [0, 1].

Outliers - Metrics

- outlier_ratio.txn_amount: 0.137
- outlier_ratio.account_age_days: 0.0
- outlier_ratio.kyc_risk_score: 0.019
- outlier_ratio.num_txn_24h: 0.0314
- outlier_ratio.avg_amount_7d: 0.0634
- outlier_ratio.is_pep: 0.0
- outlier_ratio.sanctions_match: 0.0
- outlier_ratio.is_cross_border: 0.0
- outlier_ratio.is_fintech_rail: 0.0
- outlier_ratio.origin_country_code: 0.0
- outlier_ratio.destination_country_code: 0.0
- outlier_ratio.ip_country_code: 0.0
- outlier_ratio.currency_code: 0.0
- outlier_ratio.txn_channel_code: 0.1484
- outlier_ratio.payment_rail_code: 0.0
- outlier_ratio.txn_type_code: 0.0
- outlier_ratio.merchant_category_code: 0.0
- outlier_ratio.device_type_code: 0.0
- outlier_ratio.is_suspicious: 0.0

Outliers - Explanation

- Top outlier ratios: [('txn_channel_code', 0.1484), ('txn_amount', 0.137), ('avg_amount_7d', 0.0634),
- ('num_txn_24h', 0.0314), ('kyc_risk_score', 0.019), ('account_age_days', 0.0), ('is_pep', 0.0),
- ('sanctions_match', 0.0), ('is_cross_border', 0.0), ('is_fintech_rail', 0.0)].

Top Outlier Ratios