

# FIELD WEIGHTAGE LIST

*These are the business-impact weights used by ML + Rules*

This document explains the **relative importance** of each field in the fraud engine.

## 1. Amount-Based Weightage

Field	Weight	Reason
Amount	★★★★★	Primary fraud indicator; used in ML + 7 rules
Monthly average	★★★★★	Behavioral modeling
7-day avg	★★★★	Spike detection
ATM withdrawal amount	★★★★	Channel-specific

## 2. Location Weightage

Field	Weight	Reason
txn_country	★★★★★	Highest risk when different from home_country
txn_city	★★★★★	City-level geo anomalies
home_country	★★★★★	KYC anchor
home_city	★★★★	Behavior baseline
lat/lon (travel distance)	★★★★★	Impossible-travel detection

## 3. Device & IP Weightage

Field	Weight	Reason
DeviceID	★★★★★	Device mismatch rules
device_last_seen	★★★★	Past-device consistency
client_ip	★★★	Risk context only
ip_country (auto from txn_country)	★★★★	Cross-country mismatch

## 4. Time of Day / Calendar Weightage

Field	Weight	Reason
hour	★★★★★	high-risk if 0-5 AM
day_of_week	★★★	Subtle trends
month	★★★	Seasonal anomalies

## 5. Behavioral / Velocity Weightage

Field	Weight	Reason
txns_last_1h	★★★★★	Strong indicator of bot/mule activity
txns_last_24h	★★★★★	Spike detection
txns_last_7d	★★★	Background load
failed_login_attempts	★★★★★	Account compromise
new_beneficiary	★★★★★	Strong fraud signal
beneficiary_added_minutes	★★★★★	Immediate transfers risk
beneficiaries_added_24h	★★★★	Fraud ring setup

## 6. Card-Specific Weightage

Field	Weight	Reason
card_country	★★★★★	BIN origin mismatch
cvv_provided	★★★★	CNP fraud detection
card_small_attempts_in_5min	★★★★★	Card testing detection

## 7. POS / ATM Weightage

Field	Weight	Reason
pos_repeat_count	★★★★★	Rapid repeat fraud
atm_distance_km	★★★	Distance fraud at ATM

## 8. API-Derived Weightage

Field	Weight	Reason
ip_country (derived)	★★★★	Country mismatch rule
txn_location_ip	★★	Device/IP context

## Weightage Legend

- ★★★★★ = Very high impact
- ★★★★ = High impact
- ★★★★ = Medium
- ★★ = Low
- ★ = Minimal