

Features

- FOCUS: measure of how a user distributes his donation money among causes expressed as the donation amount to a cause divided by the total amount donated to all causes by the same user
- INTENSITY: captures the donation frequency, another way of measuring the relative number of transactions a user makes to each category of causes he/she donates to compared to all other users who also donated to that same category.
- IMPACT: is the fraction of the donations in USD contributed by a user in proportion to the total USD donated by all users to the same cause category. It is very similar to INTENSITY but in terms of money.
- KIND: It is a fraction between 0 and 1.0 that encodes the category of the cause the donation was made to for a given transaction.

$$FC_i^j = \frac{\sum_{i=1}^{N_i^j} d_i^j}{\sum_{i=1}^{N_i} d_i}$$

$$IT_i^j = \frac{\sum_{i=1}^{N_i} d_i^j}{\sum_{j=1}^{N^j} \sum_{i=1}^{N_i} d_i^j}$$

$$IM_i^j = \frac{\text{amount donated by user } i \text{ to category } j}{\text{amount donated to category } j \text{ by all users}} = \frac{\sum_{i=1}^{N_i} d_i^j m_i^j}{\sum_{i=1}^{N^j} \sum_{i=1}^{N_i} d_i^j m_i^j}$$

$$KD = \frac{t}{T}$$