**Glossary:**

**Overarching terms-**

Reputation- Information used to make a value judgement about an object or person.

Karma- The reputation(s) for a user.

Reputation System- A reputation system is a set of one or more interacting reputation  
models. Created in order to build trust through reputation.

Reputation framework- The execution environment for the reputation system.

Value Judgements- a value judgement is a takeaway from a reputation statement or a  
collection of reputation statements.

(Reputable) Entities- People or things capable of accruing reputation. Can be either a source or a  
target of reputational claims. Must always have a unique identifier and is often a database key from an external database.

Reputation Statements (Claims)- A source implicitly or explicitly makes a claim about a  
target.

Implicit- Actions taken in relation to an entity.

Explicit- Asserted claims regarding an entity.

Source- The entity that has made a reputation claim(statement). Sources can comprise  
of a variety of sources (users, other reputation models, logs, filters, page scrapers, third-party feeds, recommendation engines, and other reputation roll-ups).

User (Source)- A user represents a single person’s interaction with a reputation  
system. Formal entities, have reputations for which they are the source of or in which they are the target.  
  
Aggregate Source- Reputation systems are about collecting and aggregating multiple reputation statements. The reputation statements that hold these collected claims are known as roll-ups and use the special identifier of the aggregate source.



Target- Any entity that is the target of reputation claims. Can be any reputable  
entity such as users, products, locations, companies, even IP addresses. Even other reputation statements can be reputable entities if reputation claims are made about them.

User (Target)- when a user is the reputable entity of a claim, it is known as karma.

Claim- The value that the source assigned to the target in the reputation  
statement.

(Claim) Type- Is the claim a quantitative or qualitative claim and how should it  
be interpreted and the process used to interpret and present this data.  
  
Quantitative (Claim)- Numeric or quantitative scores are what most  
people think of as reputation. Ex. Letter grades, stars, percentages.  
  
Qualitative (Claim)- Any reputation information that can’t be readily  
parsed by software. Ex. Text reviews, videos, photos.

Raw score- the score is stored in raw form—as the source created it. Keeping the original value over the normalized value to maintain precision of score.

Normalized score- Quantitative scores should be converted to a normalized score to make them easier to compare to each other. Makes it easier to determine the support of your reputation.

Reputation Model- A reputation model describes all of the reputation statement, events, and processes for a particular context. Usually, a model focuses on a single type of reputable entity.

Reputation Context- Relevant category for a specific reputation. Someone might be a good mechanic but give terrible stock trading advice.

Reputation message- information supplied to a reputation process for some sort of computation action. Ex. averaging of stars.

Reputation process- Using the reputation message, these processes normalize, transform, store, and decide how to route new messages, or, most often, calculate a value.

Stored Reputation Value- simply, the value that is stored and increased/decreased when a successful reputation statement is made.

Roll-up- any aggregated reputation score that incorporates multiple inputs over time or from multiple processes. Ex. simple average and simple accumulator.

Local Reputation- Reputation generated solely through local interactions. Ex. someone  
who is known to not take care of personal hygiene, a good neighborhood food joint that gives discounts to regular customers.

Global Reputation- When strangers who do not have access to local reputation contexts  
and need to make decisions regarding a reputable entity. Reputation aggregated in broader contexts. Ex. credit score.

Positive Reputations- Represent the relative value of an entity or user (relevance,  
popularity, even quality).

Negative Reputations- Identify undesirable content and users for further action.

Cost Reduction- Used primarily to police entities with negative reputations, is an  
automated process usually to preserve the value of a reputation system.

Diagram

Description automatically generated Virtuous Circle-

An Economic Approach-

Sharing Economy- An economic system in which assets or services are shared between private individuals (peer-to-peer). Typically involves some type of online platform that connects buyers and sellers.

Reputation Banks- Stylistically, the concept of building reputation through one system and carrying it to another system. Allows for maintenance of reputation capital across a variety of services.

Reputation Capital- The quantitative measure of some entity’s reputational value in some context, such as a community or a marketplace.

Reputation Systems: Modern Challenges-

Scale- how to manage—and present—an overwhelming inflow of user contributions.

Quality- How to distinguish good from bad.

Engagement- How to reward contributors in a way that keeps them coming back.

Moderation- How to stamp out the worst stuff quickly and efficiently

The primary purpose of a reputation system is to generate trust through the accumulation of reputation. In modern times, reputation has expanded from a neighborhood endeavor to a global one. No longer can you see the name of a trusted individual in the newspaper reviews and hold trust in the claim about a reputable entity. Now most reputation is garnered through anonymous interactions between reputable entities that have little to no personal attachment to whoever might be viewing the claim. The sheer scale of reputation statements regarding a reputable entity can be overwhelming, confusing, and often times inconsistent. Thus comes reputation systems which seek to collect, formulate, and regulate the vast amount of reputation statements into a consumable medium. This is done through either a single reputation model or a collection of interacting reputation models. These reputation models seek to process the reputation statements into a consumable medium so an entity can come to a decision regarding a reputable entity without having to engage with the reputable entity at all. These reputation models are built upon a reputation framework that handles all the computational requirements that a model requires.

Here we arrive at a core consideration of reputation systems, the reputation system is only valuable if it is trusted by those using it. Here we intend to remove (at least partially) trust from that consideration via building the reputation system atop a near-immutable blockchain to ensure that all reputation statements are valid and the reputable entity making them is backed by a history of valid reputation statements.