TigerGraph

TigerGraph is a graph database platform. It was launched in 2012. It can analyze around 10 hops or more in real-time. It could be used in domains like Financial Services, Healthcare. Life science, advertising, media and technology. It provides TigerGraph DB, TigerGraph Cloud, and GraphStudio. It can achieve so may features since it makes use of Native Parallel Graph Technology. The language used to query data is GSQL. This Graph model is used for both computation and storage. It consists of vertices connected by edges, that could themselves be compute functions thereby providing both computation and storage features.

Advantages:

Schema is flexible
Complex transactions could be easily handled
Makes use of deep analytics
Can seamlessly handle huge volumes of data.

Use Cases:

It could be mainly used for

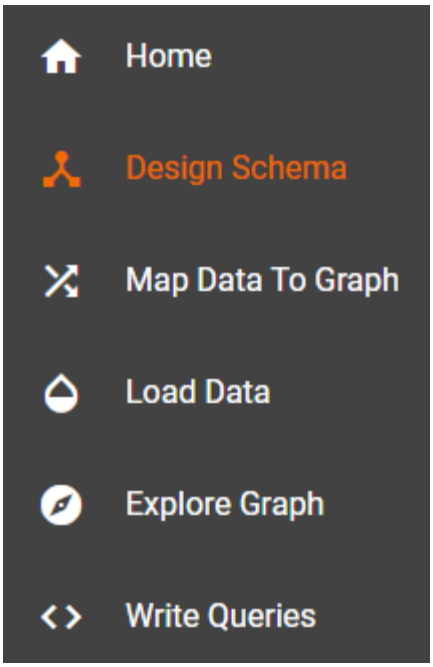
- Fraud Detection
- Recommendations
- Risk Assessment and Monitoring
- Anti-Money Laundering
- Product and Service Marketing
- Customer Journey/360

Example:

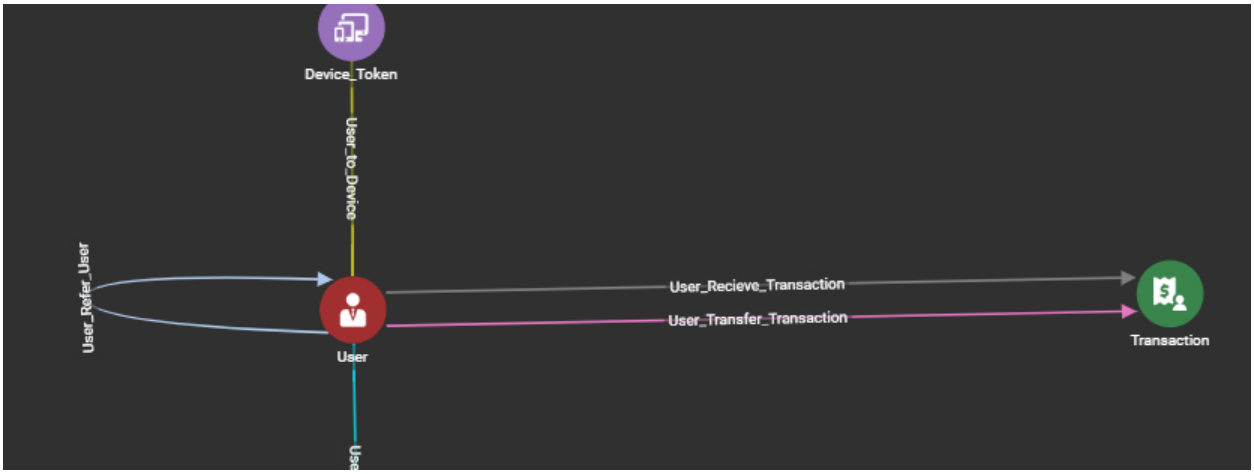
In this document, I would provide more information related to Fraud Detection with an example provided at [1] to use TigerGraph for it.

Design Schema

First, we need to create graph database. For that we have Design Schema Option on GraphStudio.

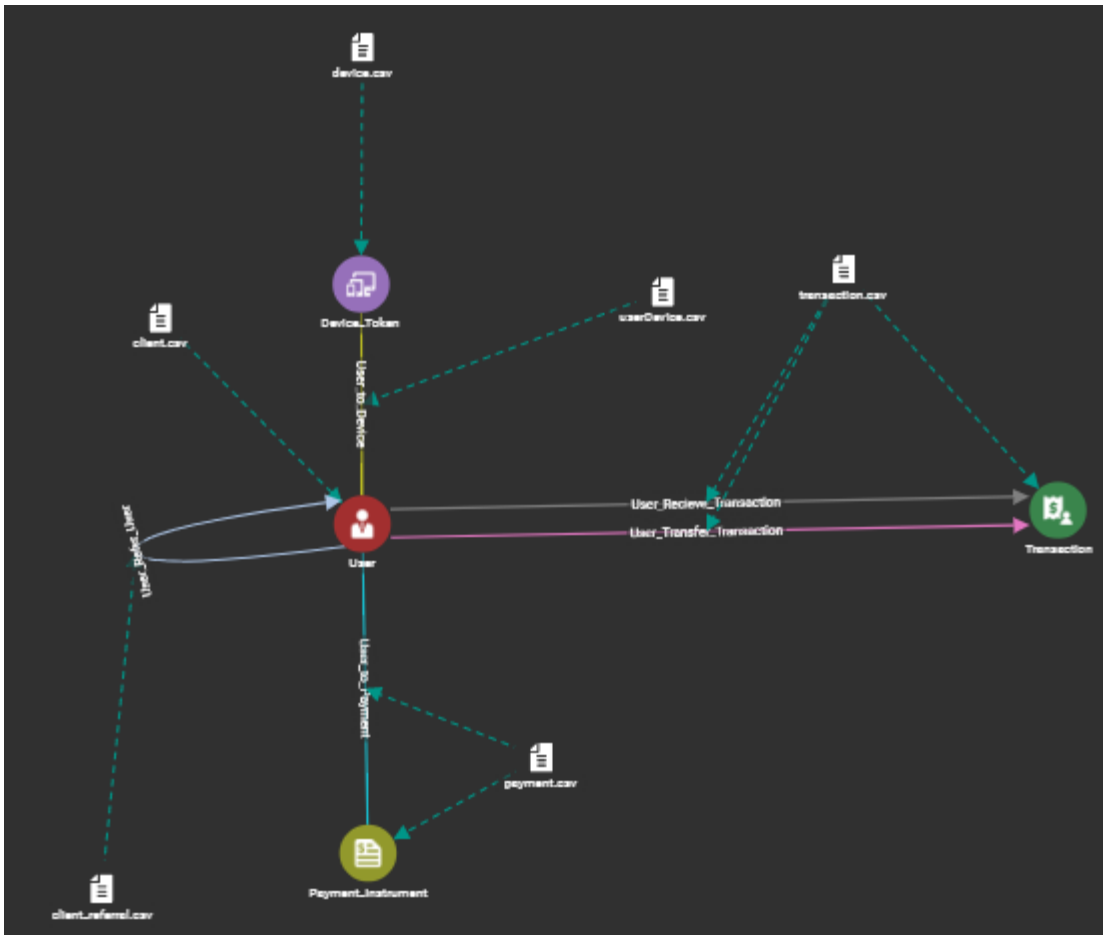


It consists of vertices and edges as shown below:



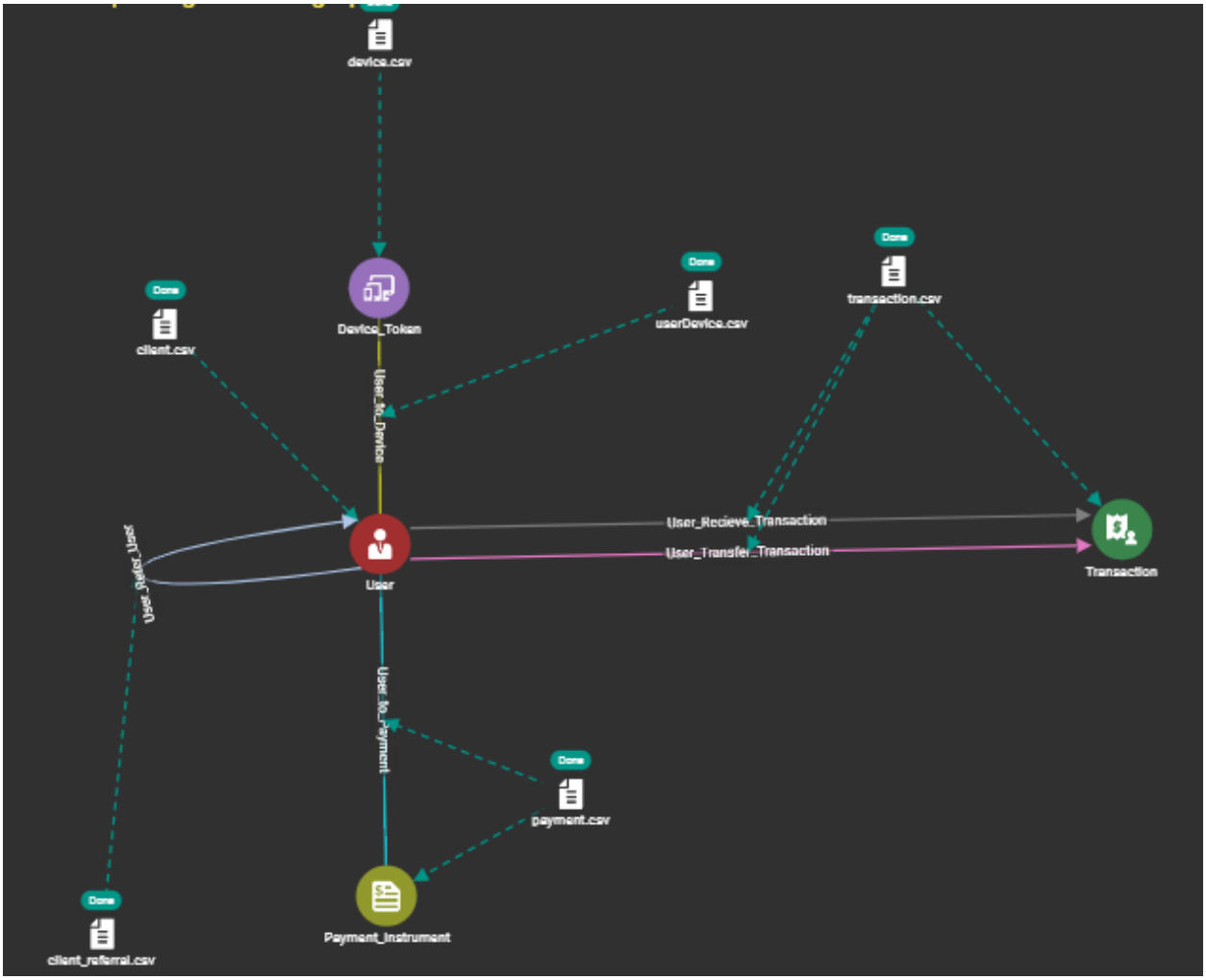
Map Data to Graph

Here the actual mapping takes place, where csv files contain the data and are used to connect vertices or edges.



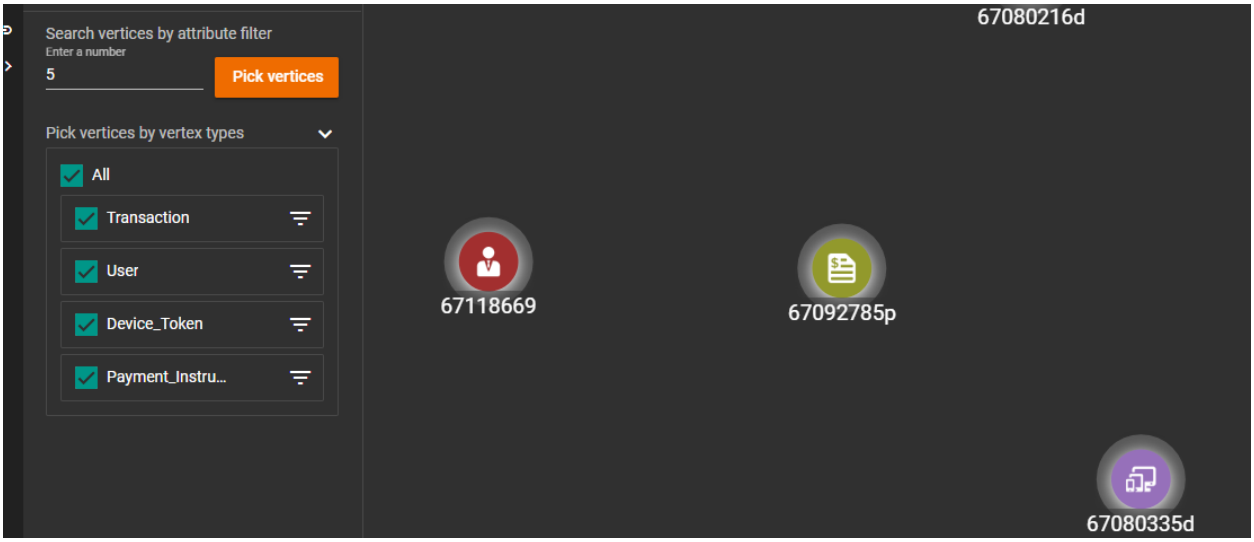
Load Data

The data needs to be loaded, once the data is loaded the state changes from pending to Done as shown below:



Explore Graph

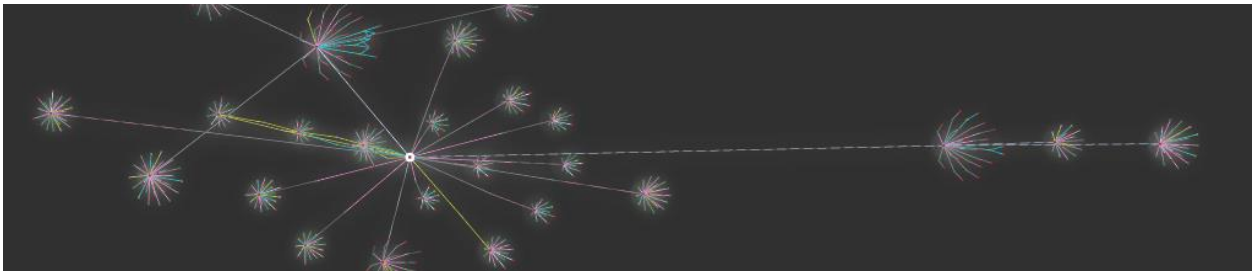
It helps to explore the various vertices created in the graph:



Write queries

There are six queries provided by default at [2]

Let us take the example of FraudConnectivity query its output is as follows:



Limitations:

- It doesn't support real-time analytics.
- The limitations are also with respect to GSQL that are listed here:

https://docs.tigergraph.com/v/3.0/dev/gsql-ref/querying/appendix-query/interpreted-gsql-limitations

References:

[1] https://antifraud-testdrive.tigergraph.com:44240/#/schema-designer
[2] https://antifraud-testdrive.tigergraph.com:44240/#/query-editor