02_Bitcoin_OTC_histograms

August 19, 2023

```python
[1]: import numpy as np
     import pandas as pd
     import matplotlib.pyplot as plt
```

0.1 Bitcoin OTC

```python
[2]: bitcoin_otc_gf = pd.read_csv("bitcoin_otc_gf.csv")
     for col in bitcoin_otc_gf.columns[1:-1]:
         x = bitcoin_otc_gf.loc[bitcoin_otc_gf["label"] == 1, col]
         y = bitcoin_otc_gf.loc[bitcoin_otc_gf["label"] == 0, col]

         bins = np.linspace(min(bitcoin_otc_gf[col]), max(bitcoin_otc_gf[col]), 50)

         plt.hist(round(x, 5), bins, alpha=0.5, label='benign', weights=np.
      ↪ones(len(x))/len(x))
         plt.hist(y, bins, alpha=0.5, label='fraudulent', weights=np.ones(len(y))/
      ↪len(y))
         plt.legend(loc='upper right')
         plt.title(col)
         #plt.savefig(f'./charts/{col}.pdf')
         plt.show()
```

betweenness

closeness

harmonic_centrality

eccentricity

coreness

constraint

hub_score

authority

local_clustering_coef

nb_mean_pagerank

nb_min_pagerank

nb_max_pagerank

nb_std_pagerank

nb_mean_degree

nb_min_degree

nb_max_degree

nb_std_degree

nb_mean_betweenness

nb_min_betweenness

nb_max_betweenness

nb_std_betweenness

nb_mean_closeness

nb_min_closeness

nb_max_closeness

nb_std_closeness

nb_mean_harmonic_centrality

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nb_min_harmonic_centrality

nb_max_harmonic_centrality

nb_std_harmonic_centrality

nb_mean_eccentricity

nb_min_eccentricity

nb_max_eccentricity

nb_std_eccentricity

nb_mean_coreness

nb_min_coreness

nb_max_coreness

nb_std_coreness

nb_mean_constraint

nb_std_constraint

nb_mean_hub_score

nb_min_hub_score

nb_max_hub_score

nb_std_hub_score

nb_mean_authority

nb_min_authority

nb_max_authority

nb_std_authority

nb_mean_local_clustering_coef

nb_min_local_clustering_coef

nb_max_local_clustering_coef

nb_std_local_clustering_coef

nb_mean_pagerank_1

nb_mean_pagerank_2

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nb_mean_degree_1

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nb_mean_harmonic_centrality_1

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