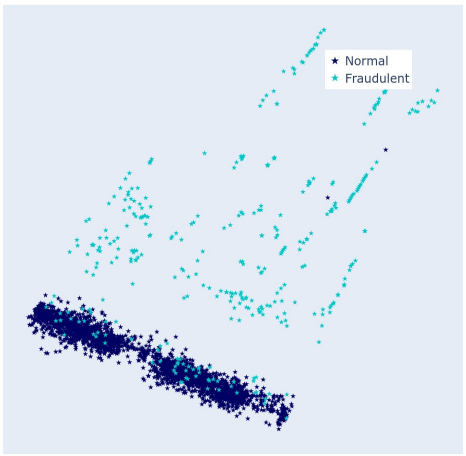
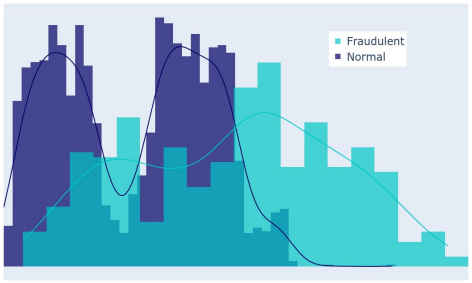
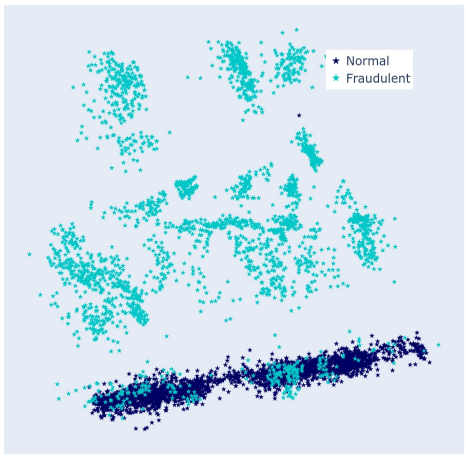
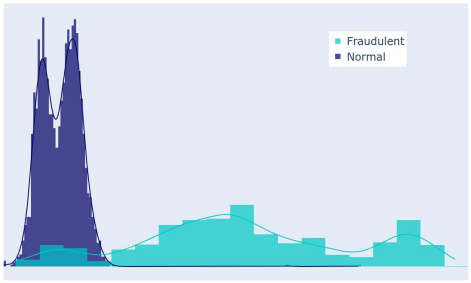




Minority	Majority	Inter.	HDR
367	2585	256	69.75%

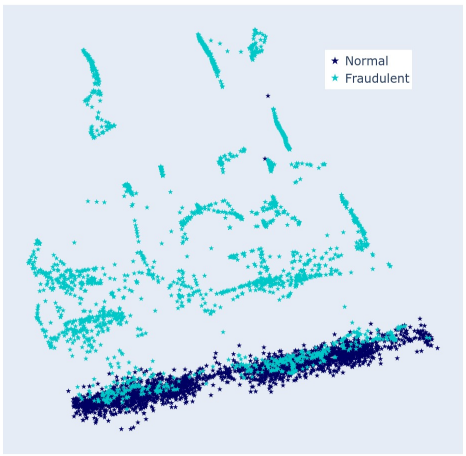
(a) Raw Data.

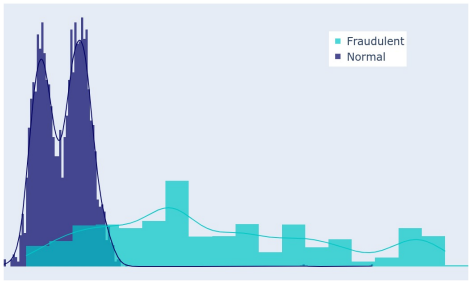




Minority	Majority	Inter.	HDR
2585	2585	288	**11.14%**

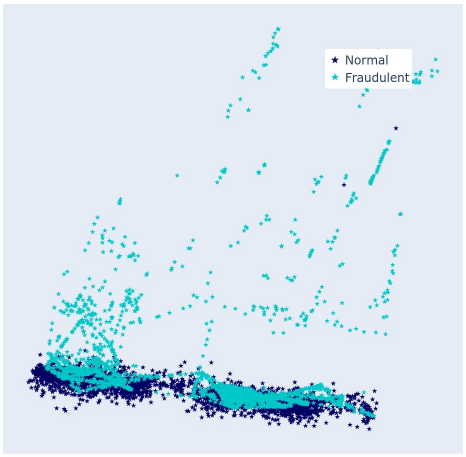
(b) SIMPOR.

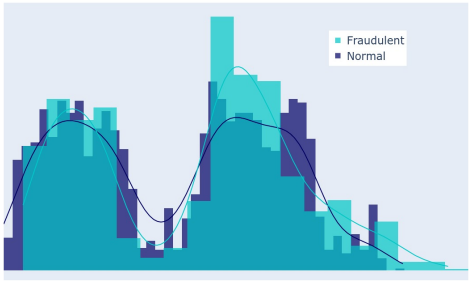




Minority	Majority	Inter.	HDR
2585	2585	534	20.66%

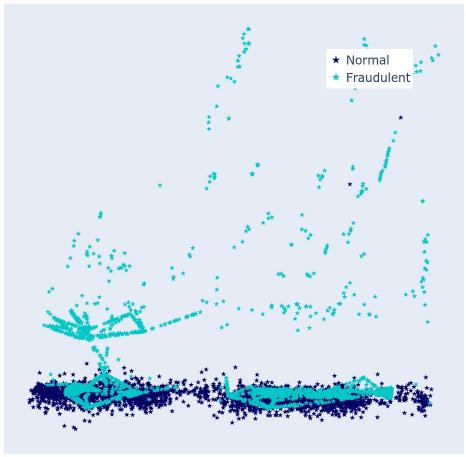
(c) SMOTE.





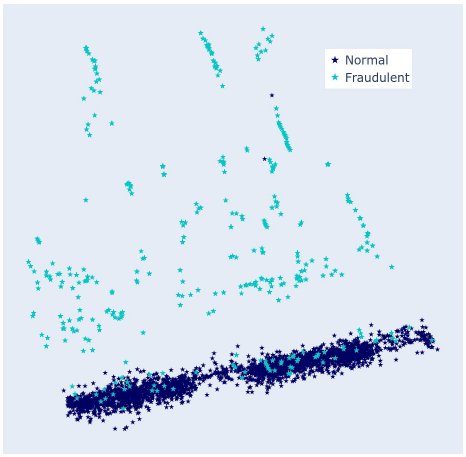
Minority	Majority	Inter.	HDR
2585	2585	2115	81.82%

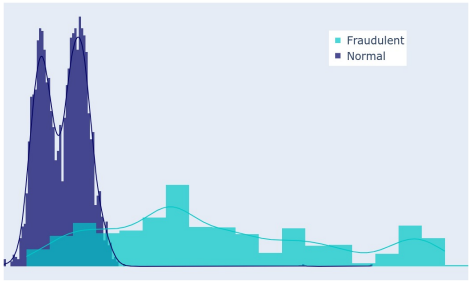
(d) ADASYN.



Minority	Majority	Inter.	HDR
2585	2585	1964	75.98%

(e) BorderlineSMOTE.





Minority	Majority	Inter.	HDR
2585	2585	544	21.4%

(f) ROS.

Figure 1: Generated training data projected onto 2-dimension space and their histograms in 1-Dimension space using Principle Component Analysis dimension reduction technique. The explanation tables illustrate the number of samples in each class (Minority and Majority), 1-Dimension histogram intersection between 2 classes, and the hard-to-differentiate ratio ($HDR = \frac{Inter.}{Fraud}100\%$).