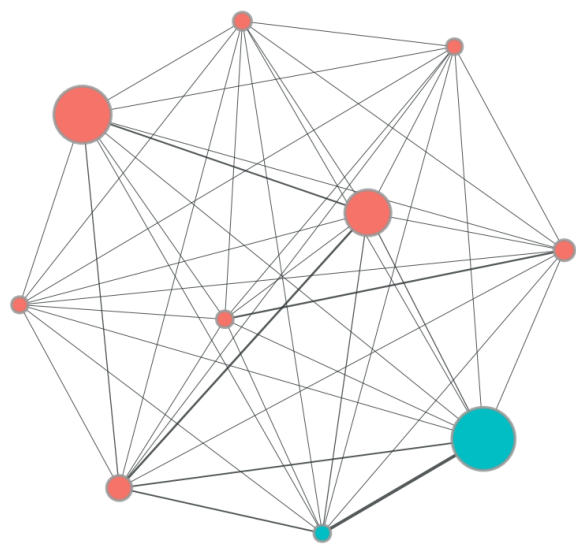
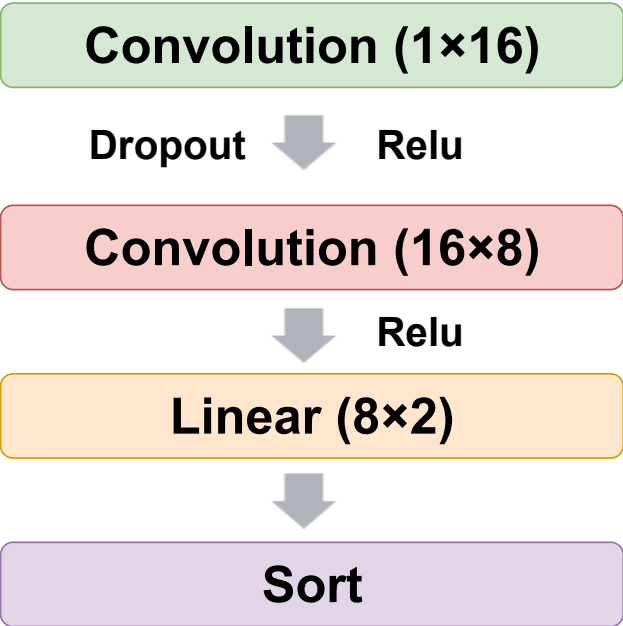


Non Euclidian

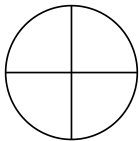


X(amt)	y(is_fraud)	Weigt matrix
$\begin{bmatrix} X_1 \\ X_2 \\ X_3 \\ X_4 \\ X_5 \\ \vdots \\ X_n \end{bmatrix}$	$\begin{bmatrix} y_1 \\ y_2 \\ y_3 \\ y_4 \\ y_5 \\ \vdots \\ y_n \end{bmatrix}$	$\begin{bmatrix} W_1 & 0 & 0 & \dots & 0 \\ 0 & W_2 & 0 & \dots & 0 \\ 0 & 0 & W_3 & \dots & 0 \\ \dots & \dots & \dots & \dots & \dots \\ 0 & 0 & 0 & \dots & W_{ I } \end{bmatrix}$



Euclidian

$$\begin{bmatrix} X_{11} & X_{12} & \dots & X_{1p} & y_1 \\ X_{21} & X_{12} & \dots & X_{2p} & y_2 \\ \vdots & & & & \vdots \\ X_{n1} & X_{n2} & \dots & X_{np} & y_n \end{bmatrix}$$



Concat

$$\begin{bmatrix} X_{1h_0} & X_{1h_1} & \dots & X_{1h_7} \\ X_{2h_0} & X_{1h_1} & \dots & X_{2h_7} \\ \vdots & & & \vdots \\ X_{nh_0} & X_{nh_1} & \dots & X_{nh_7} \end{bmatrix}$$



- NeuralNet
- RandomForest
- ExtraTree
- LightGBM
- CatBoost
- XGBoost
- ...