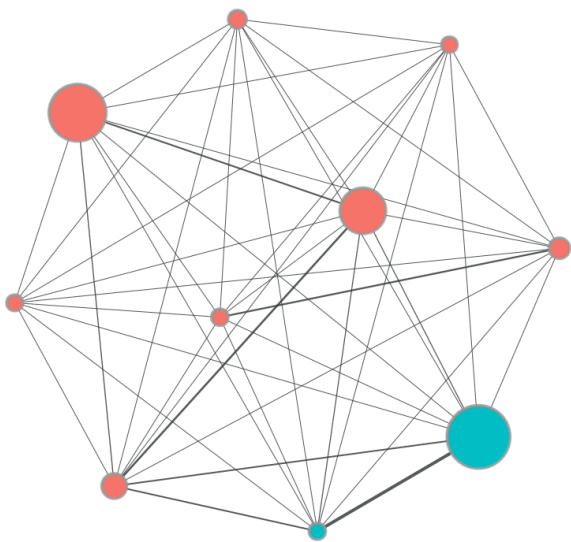
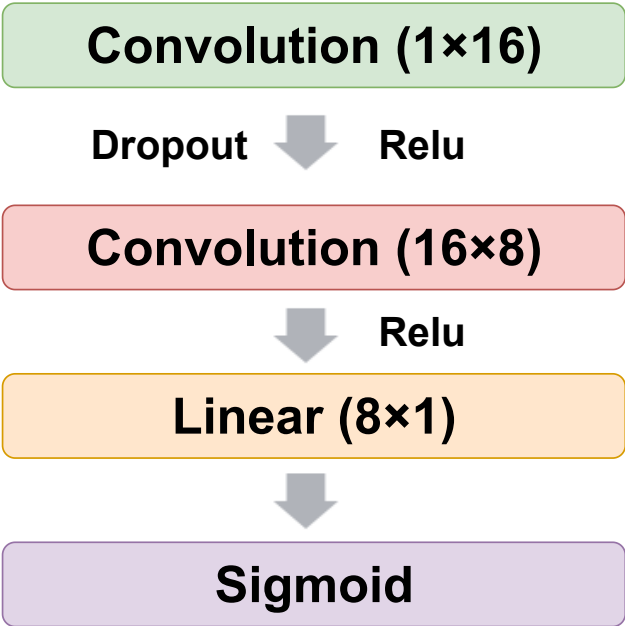


# Non Euclidian

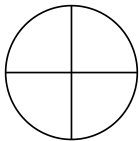


X(amt)	y(is_fraud)	Weigt matrix
$\begin{bmatrix} X_1 \\ X_2 \\ X_3 \\ X_4 \\ X_5 \\ \vdots \\ X_n \end{bmatrix}$	$\begin{bmatrix} y_1 \\ y_2 \\ y_3 \\ y_4 \\ y_5 \\ \vdots \\ y_n \end{bmatrix}$	$\begin{bmatrix} W_1 & 0 & 0 & \dots & 0 \\ 0 & W_2 & 0 & \dots & 0 \\ 0 & 0 & W_3 & \dots & 0 \\ \dots & \dots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



# Euclidian

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



Concat

$$\begin{bmatrix} H_{10} & H_{11} & \dots & H_{17} \\ H_{20} & H_{21} & \dots & H_{27} \\ \vdots & & & \vdots \\ H_{n0} & H_{n1} & \dots & H_{h7} \end{bmatrix}$$



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