**ROC-AUC Curve in Binary Classification**

**Why we need this curve?**

**ROC and AUC Provides a way to compare the performance of different machine learning classification models with positive and negative classes along with the varying thresholds So that it will be easier to understand how well the model performs and in selecting the suitable models with correct thersholds.**

**What is ROC & AUC Curves?**

* **ROC Curve gives trade-off between TPR and FPR values at different thresholds and this is helpful in selecting the appropriate threshold for the problem statement**
* **AUC gives the single value by summarizing the overall models performance and that value is very helpful in selecting the best model**
* **Generally Models with high AUC score is considered as the better model (0 to 1)**
* **AUC score Never Changes based on threshold or TPR or FPR, AUC score is based on Model Level.**

