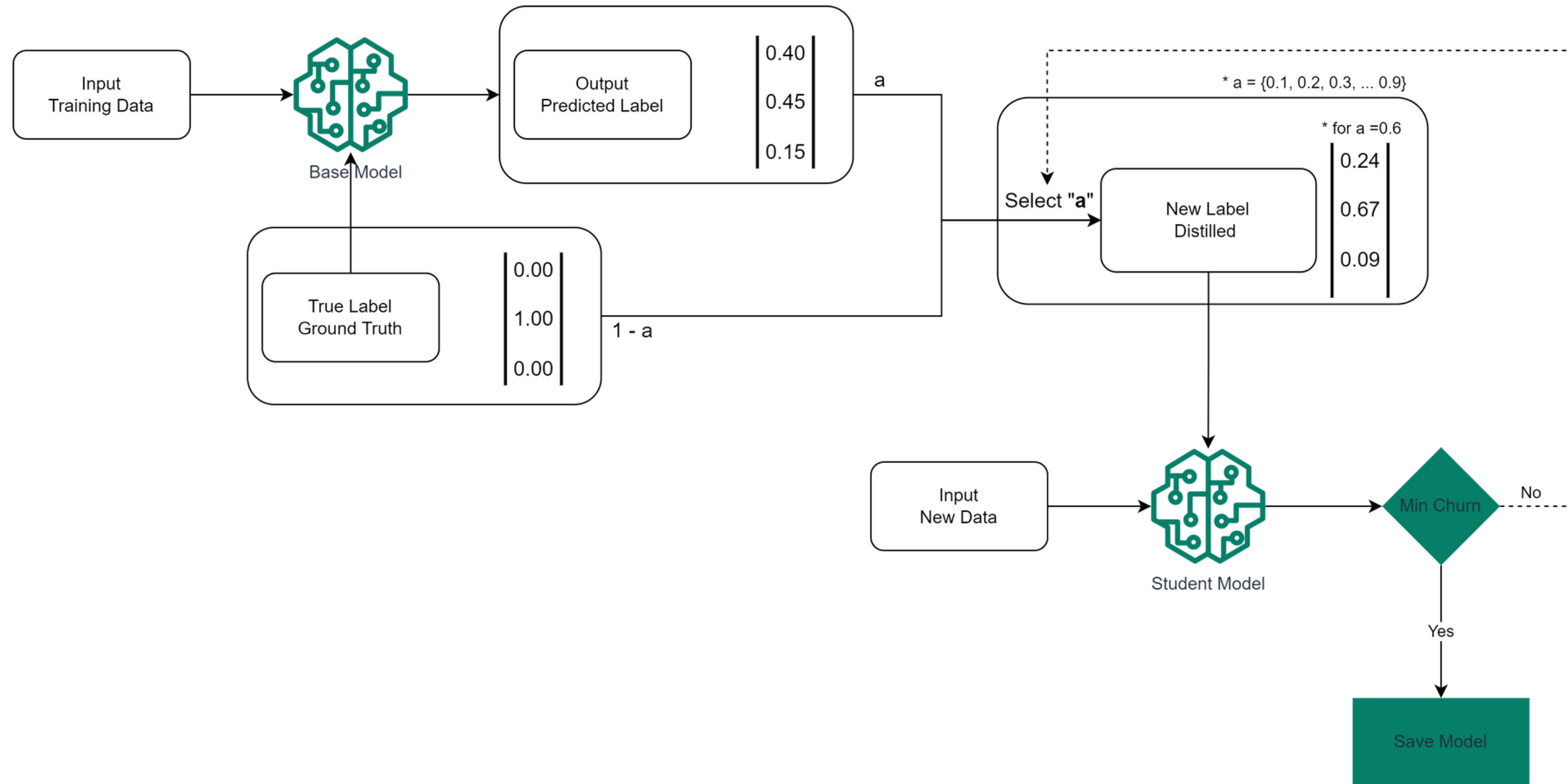
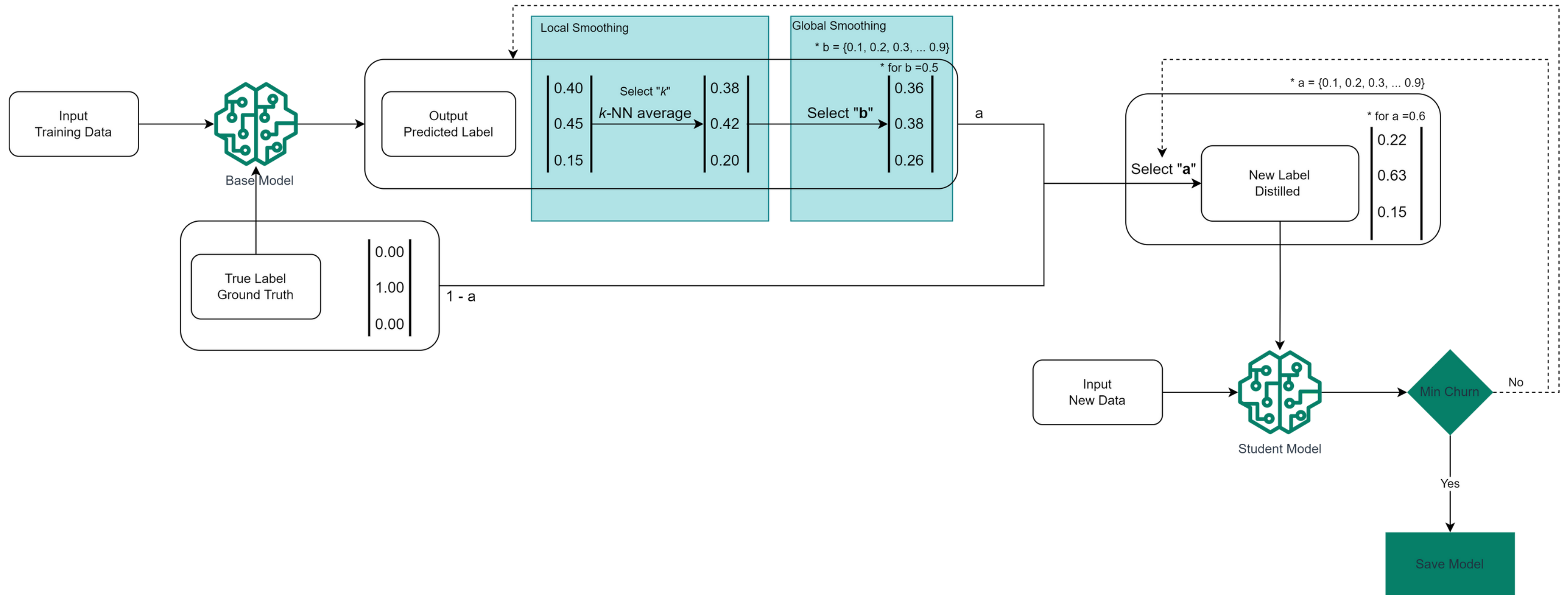


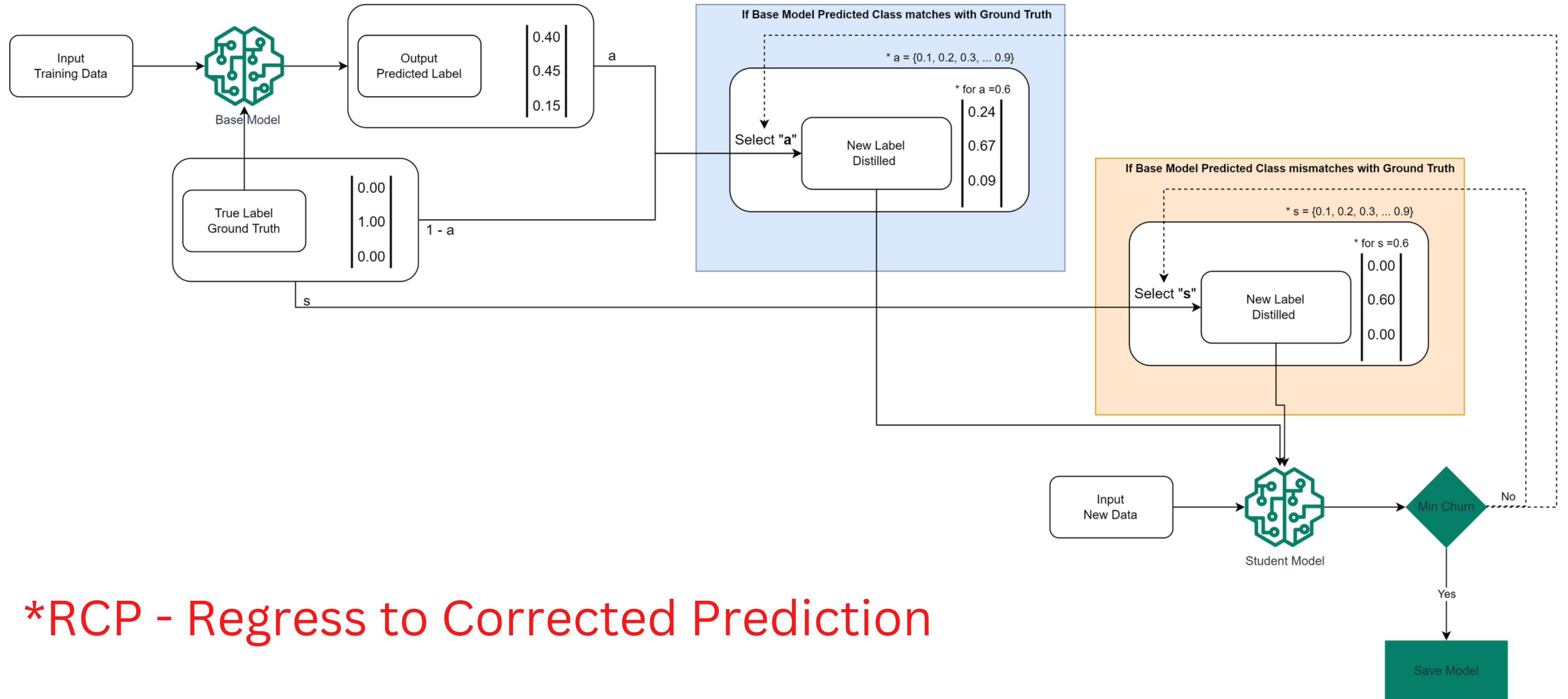
# Distillation



# Locally Adaptive Label Smoothing

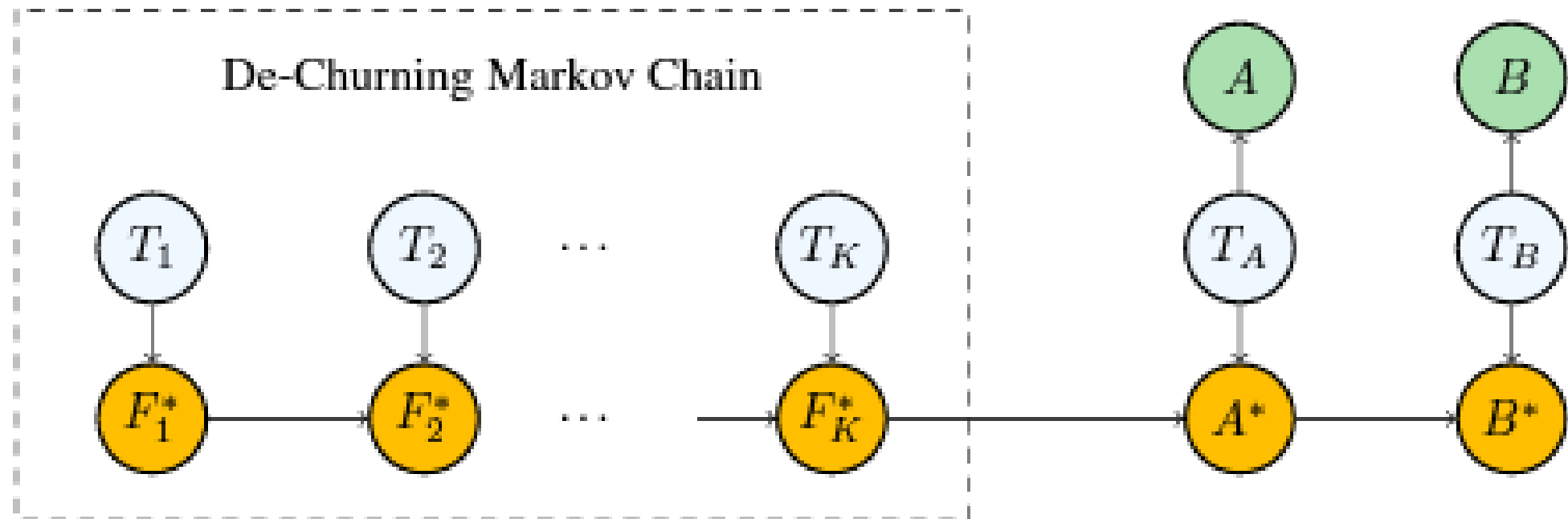


# Launch and Iterate RCP\*



# Launch and Iterate

- Base Model should be trained with de-churning Markov Chain Logic in order to achieve better result
- RPC takes less time and performs better compared to Diplopia
- Might introduce bias on label selection



# Label Modifying Equations

$$y_{distil} = (1 - a) * y_{true} + a * y_{base}$$

$$y_{rcp} = \begin{cases} (1 - a) * y_{true} + a * y_{base} & \text{,when prediction is correct} \\ \epsilon * y_{true} & \text{,otherwise} \end{cases}$$

$$y_{knn} = (1 - a) * y_{true} + a * (b * 1/L * 1 + (1 - b) * y_{base*})$$

Where  $a, b \in [0, 1]$

L is number of classes

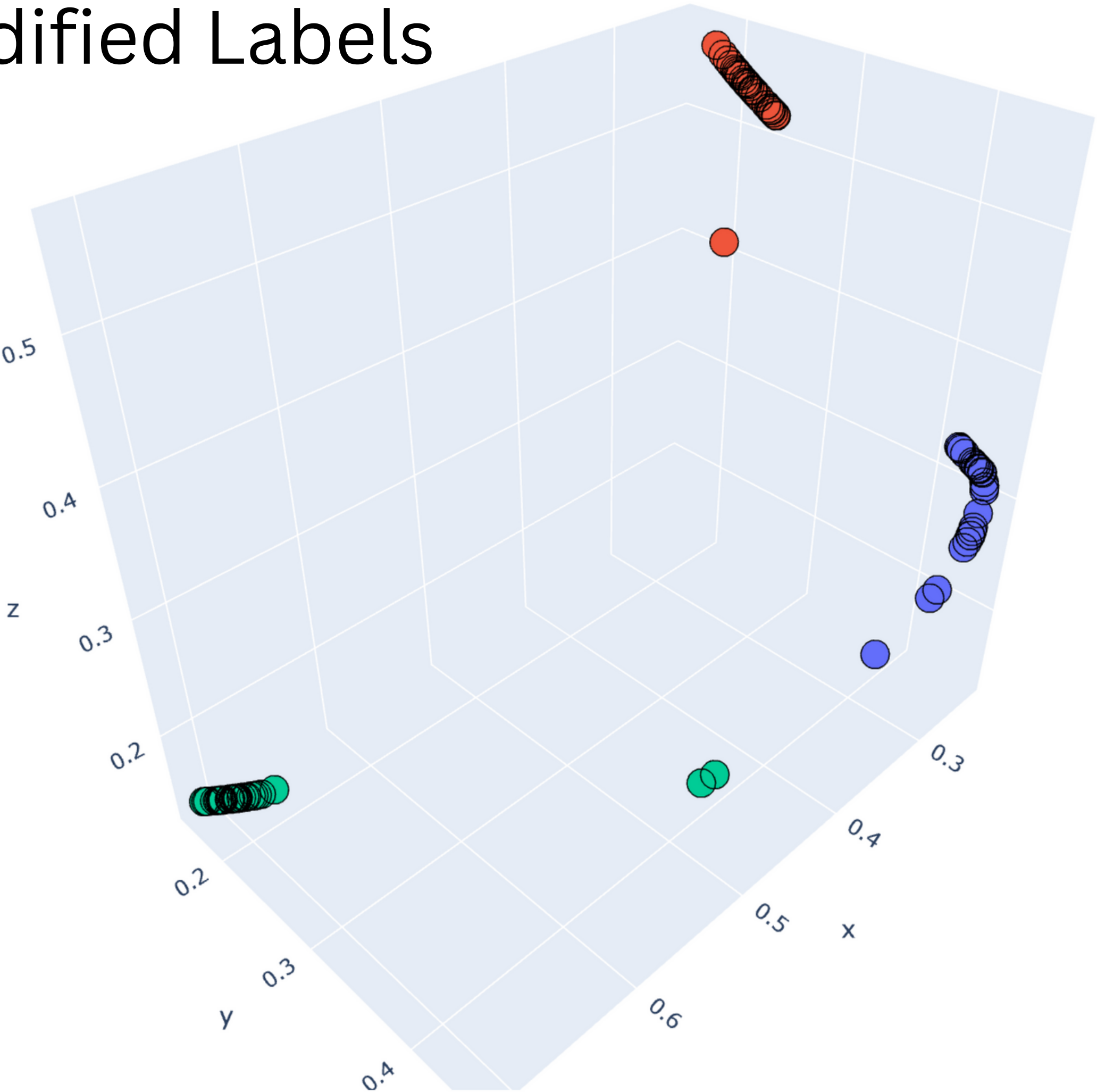
# Hyperparameters

	Locally Adaptive Label Smoothing	Launch and Iterate RCP	Distillation
	<i>Number of <math>k</math> NN</i>		
	<i>Tradeoff between Local and Global Smoothing</i>	<i>Scalar to adjust Ground Truth</i>	<i>Softmax Temperature</i>
	<i>Tradeoff between Base and Ground Truth</i>	<i>Tradeoff between Base and Ground Truth</i>	<i>Tradeoff between Base and Ground Truth</i>
<b>Hyperparameters to be tuned</b>	<b>3</b>	<b>2</b>	<b>2</b>

# Modified Labels



Each dot represents the modified label of an observation



# Locally Adaptive Label Smoothing on IRIS

- Number of  $k$  NN: **10**
- Tradeoff between Local and Global Smoothing: **0.5**
- Tradeoff between Base and Ground Truth:  **$\alpha$**

