

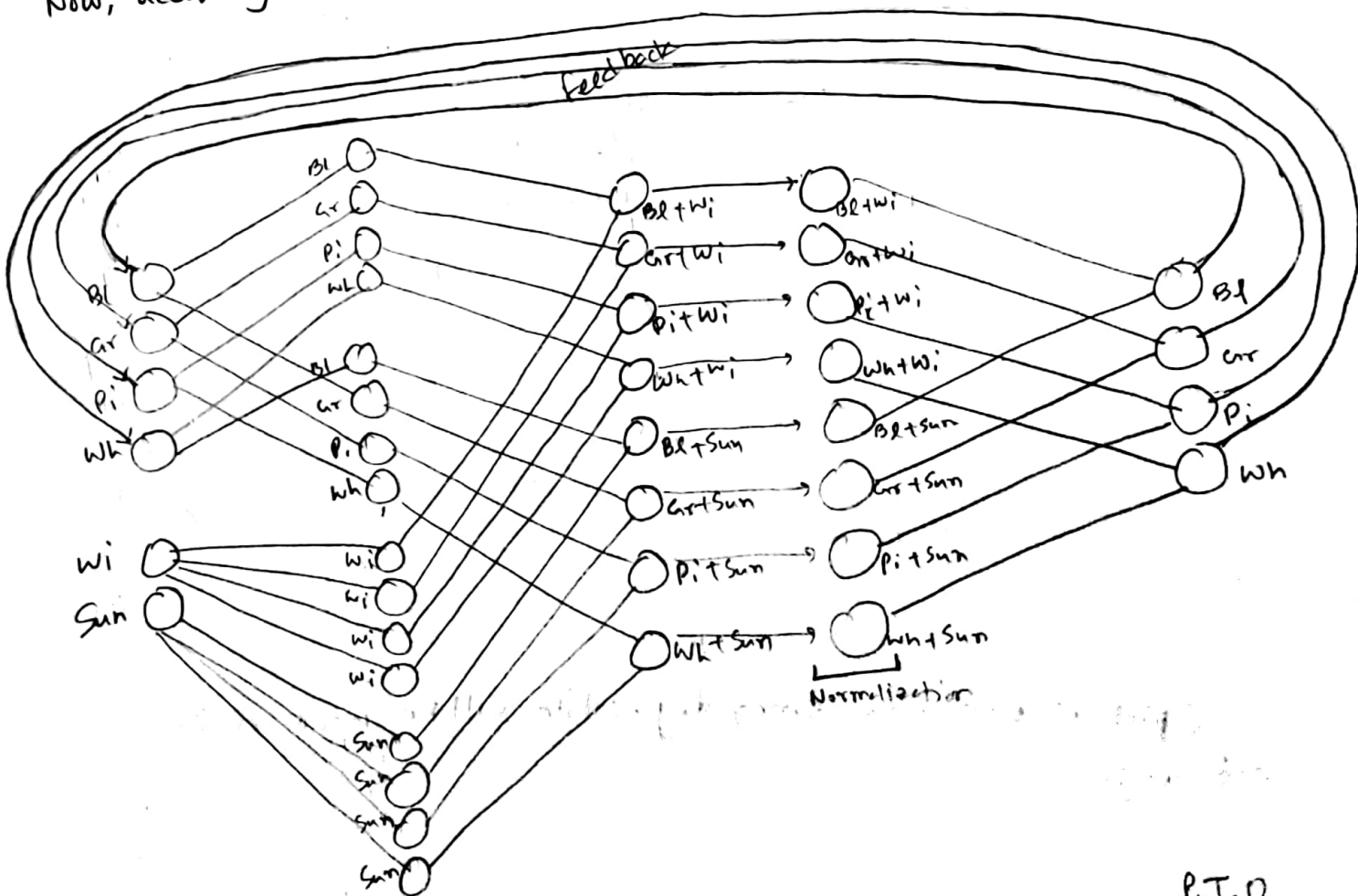
According to the given scenario, the inputs will be the weather condition (sunny and windy) and the outputs will be the color of clothes worn based on weather (Black, Gray, Pink, White).

So, if we want to represent the scenario in a tabular format:

Day	Su	M	Tu	We	Th	Fr	Sa
Dress/Color	Pi	Pi	Wh	Bl	Bl	Gr	Gr
Weather	Win	Sun	Sun	Win	Su	Win	Su

bl → gr → pi → wh

Now, according to this, the KNN will be:

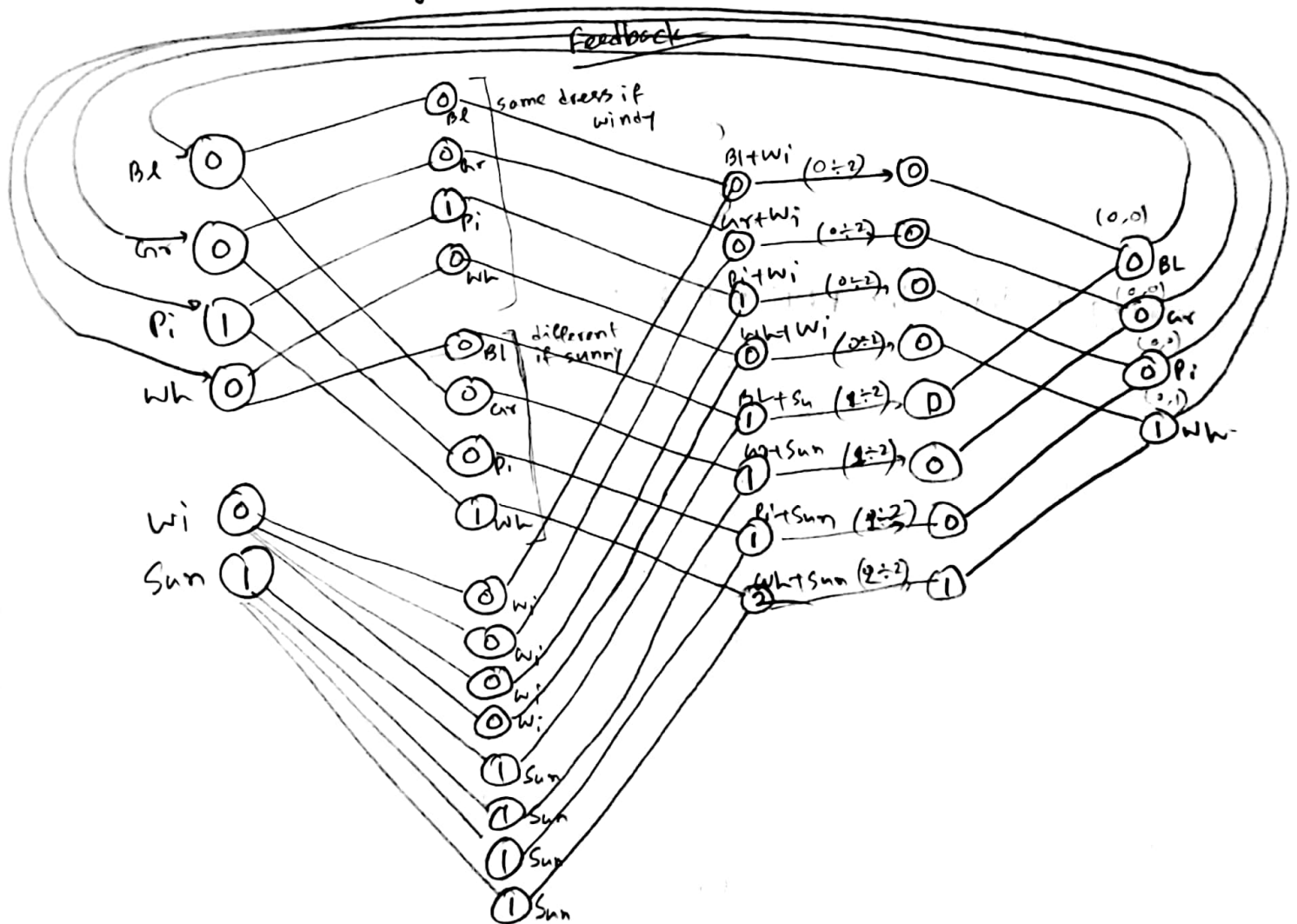


P.T.O

One hot encoding for inputs & outputs are:

$$Bl = \begin{bmatrix} 1 \\ 0 \\ 0 \\ 0 \end{bmatrix}, \quad Cr = \begin{bmatrix} 0 \\ 1 \\ 0 \\ 0 \end{bmatrix}, \quad Pi = \begin{bmatrix} 0 \\ 0 \\ 1 \\ 0 \end{bmatrix}, \quad Wh = \begin{bmatrix} 0 \\ 0 \\ 0 \\ 1 \end{bmatrix}, \quad Wi = \begin{bmatrix} 1 \\ 0 \end{bmatrix}, \quad Sun = \begin{bmatrix} 0 \\ 1 \end{bmatrix}$$

Now, According to drawn RNN, if we assume today is Sunny and the color of dress worn today is Pink :



So if pink is worn on a sunny day, white will be worn on the next day.