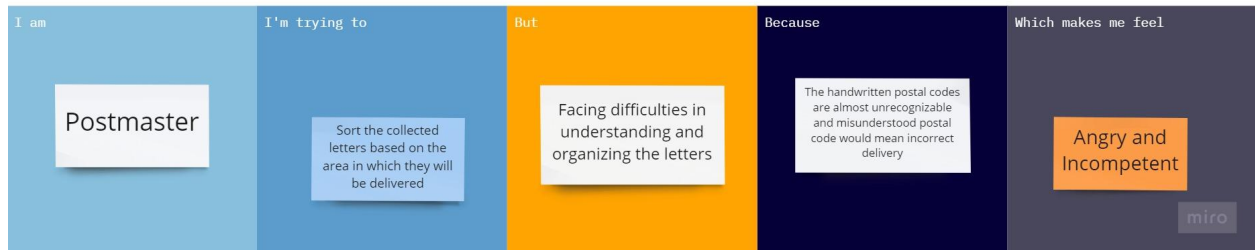


IDEATION PHASE
PROBLEM STATEMENTS

| | |
|----------------------|---|
| Date | 19 September 2022 |
| Team ID | PNT2022TMID13012 |
| Team Leader | Goutham DT (718019I219) |
| Team mates | Ayush Srikanth (718019I206) Gayathri M (718019I216) Lavaniya H (718019I230) |
| Domain Name | Artificial Intelligence |
| Project Name | A Novel Method for Handwritten Digit Recognition System |
| Maximum Marks | 2 Marks |

Customer Problem Statement:

Character handwriting recognition has been around since the 1980s. Handwritten digit recognition using a classifier offers a wide range of applications, including digital digit recognition on PC devices, recognising zip codes on mail, handling bank cheque amounts, numeric portions in structures filled out by hand (for example, tax forms), and so on. There are several difficulties encountered while attempting to address this problem. The digits are not necessarily the same height, width, orientation, or location with respect to the margins. The primary goal was to implement a pattern characterisation approach for perceiving handwritten digits using the MNIST data collection of photographs of handwritten digits (0 - 9). Machine Learning provides a variety of approaches for reducing human effort in detecting manually typed numbers. Deep Learning is a technology that educates computers to do what people do naturally: learning via examples. Human efforts in seeing, learning, recognising, and many other areas can be reduced by using deep learning approaches. The machine learns to do classification tasks from images or the text of any document using deep learning. Models using deep learning can achieve state-of-the-art accuracy, outperforming humans.



| Problem Statement (PS) | I am (Customer) | I'm trying to | But | Because | Which makes me feel |
|------------------------|---|--|---|--|-----------------------|
| PS-1 | Business Analyst working in a Financial Company | To calculate annual turnover for different departments | Facing difficulties to carry out analytics on handwritten data from customers and workers | The handwritten digits could be of different size and style according to the ones | Reduces Productivity |
| PS-2 | Postmaster | Sort the collected letters based on the area in which they will be delivered | Facing difficulties in understanding and organizing the letters | The handwritten postal codes are almost unrecognizable and misunderstood postal code would mean incorrect delivery | Angry and Incompetent |