**Project Design Phase-**
**IProposedSolutionTempl**
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| Date | 02 November 2022 |
| TeamID | PNT2022TMID29489 |
| ProjectName | Project – **Real - TimeCommunication SystemPoweredByAIForSpeciallyAbled** |
| MaximumMarks | 2Marks |

**ProposedSolutionTemplate:**

Projectteamshallfillthefollowinginformationinproposedsolutiontemplate.

| S.No | Parameter | Description |
|---|---|---|
| 1. | ProblemStatement(Problemtobesolved) | **ToprovideanEfficientcommunicationappwhichtranslates the hand signs into text and voice mode for deafanddumbpeople**. |
| 2. | Idea/Solutiondescription | • **Convolution Neural Networks**are to be used totakehandsignasaninput toextractedges,corners.<br>• DatasetisusedfortrainingCNN.Onedatasetfor **handdetection** andtheotherfor**gesturedetection**.<br>• **Voiceassistantisimplemented**thattakeinput asspeechpatternsandconvert thetextintovoice. |
| 3. | Novelty/Uniqueness | We havenumber of symbols to be trained for our projectand many of them look similar to each other like the **gesturefor symbol ' V' and digit ' 2'** .To produce better accuracies,**wekeepthebackgroundof handastablesinglecolour**,so thatwedon' t needtosegmentitonbasisofskincolour. |
| 4. | SocialImpact/CustomerSatisfaction | • AI enables people with disabilities to **lead anindependentlifewiththisapp**.<br>• **Supportingthem**inactivitiesofdailyliving.<br>• **Itchangesthemindsetof thedisabled,thateven theycantoobeinvolvedinacommo nconversationlikeothers.** |
| 5. | BusinessModel (RevenueModel) | • Fasterandefficient,the**concernedtextorvoice asoutput is produced,the more it leads to optimizetheappwithnewadvancements.**<br>• Theproductivityisgainedandatthesametime, **leadstoimprovedspeedofbusiness**. |
| 6. | ScalabilityoftheSolution | Aconvolutionalneuralnetworkcanbescaledinth reedimensions:*depth,width,resolution*.<br>• **Depth**ofthenetworkcorrespondstothenumbe roflayersinanetwork.<br>• **Width**isassociatedwiththenumberofneuronsi nalayer.<br>• **Resolution**istheimageresolutionthatisbei ngpassedtoCNN.<br>**Increasingthedepth**,bystackingmoreconvolutionallay ers,allowsthenetworktolearn**morecomplexfeatures**. |