Project Design PhaseI
ProposedSolutionTemplate

Date	29September2022
TeamID	PNT2022TMID00668
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. • DatasetisusedfortrainingCNN.Onedatasetfor **handdetection** andtheotherfor**gesturedetection**. • **Voiceassistantisimplemented**thattakeinputasspeechpatternsandconvert 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**. • **Supportingthem**inactivitiesofdailyliving. • **Itchangesthemindsetof thedisabled,thateven theycantoobeinvolvedinacommoncon versationlikeothers.**
5.	BusinessModel (RevenueModel)	• Fasterandefficient,the**concernedtextorvoiceasoutput is produced,the more it leads to optimizetheappwithnewadvancements.** • Theproductivityisgainedandatthesametime, **leadstoimprovedspeedofbusiness**.
6.	ScalabilityoftheSolution	Aconvolutionalneuralnetworkcanbescaledinthreedimensions:*depth,width,resolution*. • **Depth**ofthenetworkcorrespondstothenumberoflayers inanetwork. • **Width**isassociatedwiththenumberofneuronsinalayer. • **Resolution**istheimageresolutionthatisbeingpassedtoCNN. **Increasingthedepth**,bystackingmoreconvolutionallayers,allowsthenetworktolearn**morecomplexfeatures**.