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| **SEMESTER** | | | | **FALL 2021** | | | **YEAR** | | | | **2021-2022** | |
| **TITLE OF PROPOSED PROJECT** | | | | | | | | | | | | |
| **Sign translation into Urdu Language** | | | | | | | | | | | | |
| **Project Category (choose one)** | | | | | **□ Product based** | | | | | **□ Research-based** | | |
| **SUPERVISOR INFORMATION** | | | | | | | | | | | | |
| **Supervisor Name:** | | | **(leave blank)** | | | | | | **Organization/**  **Designation** | | | **(leave blank)** |
| **Contact No:** | | | **(leave blank)** | | | | | | **email:** | | | **(leave blank)** |
| **STUDENT(S) INFORMATION** | | | | | | | | | | | | |
| **S#** | **Student ID** | | | | | **Name** | | | | | | |
| **1** | **9879** | | | | | **Aasir Rafi** | | | | | | |
| **Contact No:** | | **03008230707** | | | | **email:** | | **aasirrafi99@gmail.com** | | | | |
| **2** | **9877** | | | | | **Tania Ayaz** | | | | | | |
| **Contact No:** | | **03350264199** | | | | **email:** | | **taniaayaz24@gmail.com** | | | | |
| **PROJECT AREA/TOOLS** | | | | | | | | | | | | |
| **Tools Required:** | | | Jupyter , VS Code , Android Studio | | | | | | | | | |
| **Area/Specialization:** | | | Machine Learning | | | | | | | | | |
| **SUMMARY OF PROPOSED PROJECT (MAXIMUM 300 WORDS)** | | | | | | | | | | | | |
| We thought to develop this research to reduce the communication gap that has found between the normal persons who can talk and speak in language that he/she knows and those personal who cannot speak because they are disabled with hearing impairment. Research is going on it to develop such tools or electronic device to help those who cannot talk. Some researches has been done in international languages but still there is a language barrier. None of them have ventured into the area of Pakistan Sign Language(PSL). Our idea is to remove that barrier and develop an application to convert signs into Urdu language in real time , So that the one with speech impairment can also deliver his message which is clear and understood to normal ones. The basic concept including theuse of gestures and syntesise the written form of the word fro normal people to understand. We are going to be building sign language detector and we are going to be doing that using the tensorflow object detection api and this will be a mobile application which is convenient to take everywhere because we cannot use desktop everywhere we go , So make it feasible to use by everyone, everywhere we decide to develop its mobile application. We will collect the dataset and work on that. | | | | | | | | | | | | |
| **PROJECT OBJECTIVE(S)/OUTCOMES** | | | | | | | | | | | | |
| Language barriers are very much still a real thing. Speech to text and translators have made it easier now. Today communication between mute/deaf and normal is very difficult. At the moment there is no electric device or service that enables communication between mute/deaf and normal. Through our project , the teachers at school and the parents at home can communicate efficiently with their deaf and mute children. | | | | | | | | | | | | |
| This will be an application which helps mute to convey the message to normal ones. And also help deaf to read the message if the normal has knowledge of sign language. The translation will be in Urdu so in it can be used in real world for those who understand Urdu much better than English. | | | | | | | | | | | | |

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| **FUNCTIONAL FEATURES** |

**For FYP 1:**

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| Collect images for using python and OpenCV  Label images for sign language detection using Label Image package  Tensorflow object detection API |

**For FYP 2:**

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| Convert to Tensorflow.js model  Detect sign language in real time  Mobile application |

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| **For Proposal Defense Purpose** |

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| **PROPOSED ADVISORY COMMITTEE** | | |
| **S#** | **Faculty Name** | **Signature** |
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| 3 |  |  |
| 4 |  |  |

**FYP Committee**

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| **FYP COMMITTEE** | | | |
| **S#** | **Member(s) Name** | **Designation** | **Signature** |
| **1** | **Usman Khan (FYP Coordinator)** | Lecturer |  |
| **2** | **Mr. Kashif Bashir / Mr Ayub Latif (Head of the Department)** | Asst. Professor |  |
| **3** | **Dr. Muhammad Khalid Khan (Director CoCIS)** | Professor |  |
| **Date** | | 00/00/0000 | |