

FUNCTIONAL REQUIREMENTS AND DATA FLOW DIAGRAM

FUNCTIONAL REQUIREMENTS

Programming Language:

Python is a popular choice for machine learning and image processing tasks. You can use it to develop the backend of the system.

Machine Learning Frameworks:

- i. TensorFlow or PyTorch:
These deep learning frameworks are commonly used for image recognition tasks and can be employed for training and deploying the model.
- ii. Scikit-learn:
Useful for traditional machine learning tasks and data preprocessing.

Image Processing and Computer Vision:

- i. OpenCV:
For image and video processing, which can be used to capture and preprocess sign language gestures.
- ii. Pillow:
For image manipulation and handling.

Version Control:

Use Git for version control to collaborate with team members and manage your codebase.

Teachable Machine:

Utilize Google's Teachable Machine platform for training the image recognition model.

Accessibility Tools:

Incorporate accessibility tools and libraries to make the application accessible to individuals with disabilities, such as screen readers.

DATA FLOW DIAGRAM

