```
Initial Setup
    │
    ├─────────────────────────┐
    │                         │
Create a new              Set up virtual
GitHub                    environment
repository                #Python
    │                         │
    ├──────┬──────┐       Install
    │      │      │       necessary
Initialize  Add   Set up     packages
with      .gitignore  branch     │
README.md          protection    ▼
                   rules     Verify
                             package ──No──┐
                             installation  │
                                 │ Yes     │
                                 ▼     (loop back to Install)
                             Data
                             Collection
                                 │
                                 ▼
                             Collect
                             ASL
                             sign
                             images
                                 │ Yes
                                 ▼
                             Define sign
                             categories
                                 │
                                 ▼
                             Source
                             images
                                 │
                                 ▼
                             Verify image ──No──┐
                             quality      ◄─────┘
                                 │ Yes
                                 ▼
                             Data
                             Preprocessing
                                 │
                                 ▼
                             Clean and
                             preprocess
                             image data
                             #DataCleaning
                                 │
                                 ▼
                             Resize
                             images
                                 │
                                 ▼
                             Normalize
                             pixel values
                              │       ▲
                            Yes      No
                              ▼       │
                             Model
                             Building
```

```
Model
Building
    │
    ▼
Define model
architecture
    │
    ▼
Compile
model
    │
    ▼
Train model
    │
    ▼
Deployment
    │
    ▼
Deploy model
to a web
application
#Deployment
    │
    ▼
Create Flask
application
    │
    ▼
Integrate
model into
application
    │
    ▼
Documentation
    │
    ▼
Document project
processes and
outcomes
#Documentation
```

```
Wrap Up
    │
    ▼
Push final
changes to
GitHub
#GitHub
    ├──────────────┐
    │              │
Review and     Update
merge pull     README.md
requests           │
                   ▼
               Release
               project
               version
```