Image Recognition - ASL

Deepthi Vaddi

March 2021

Applications

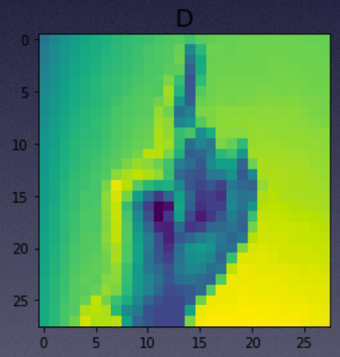
- Expand access to the differently abled
- Medical professionals can interact with devices without touching
- Home automation

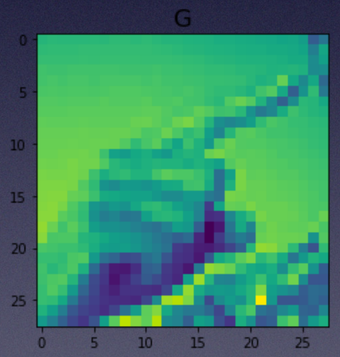
American Sign Language Alphabet

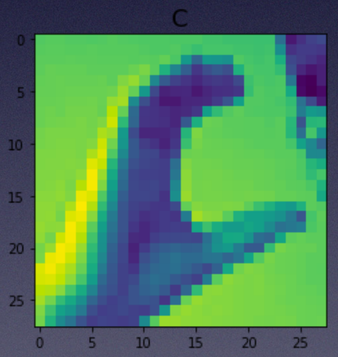
Except J and Z which involve movement

Data

Training and Validation images from Kaggle

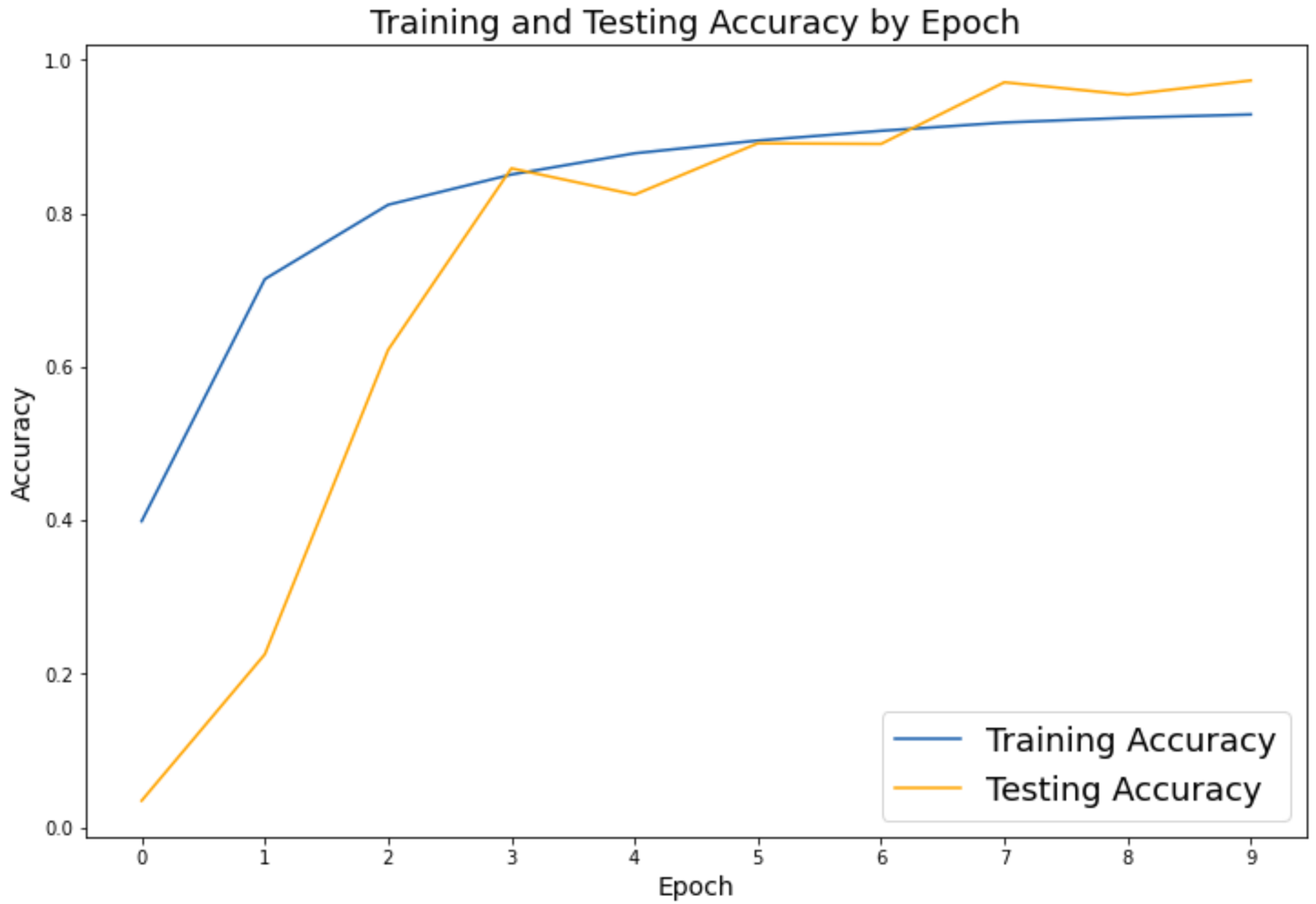






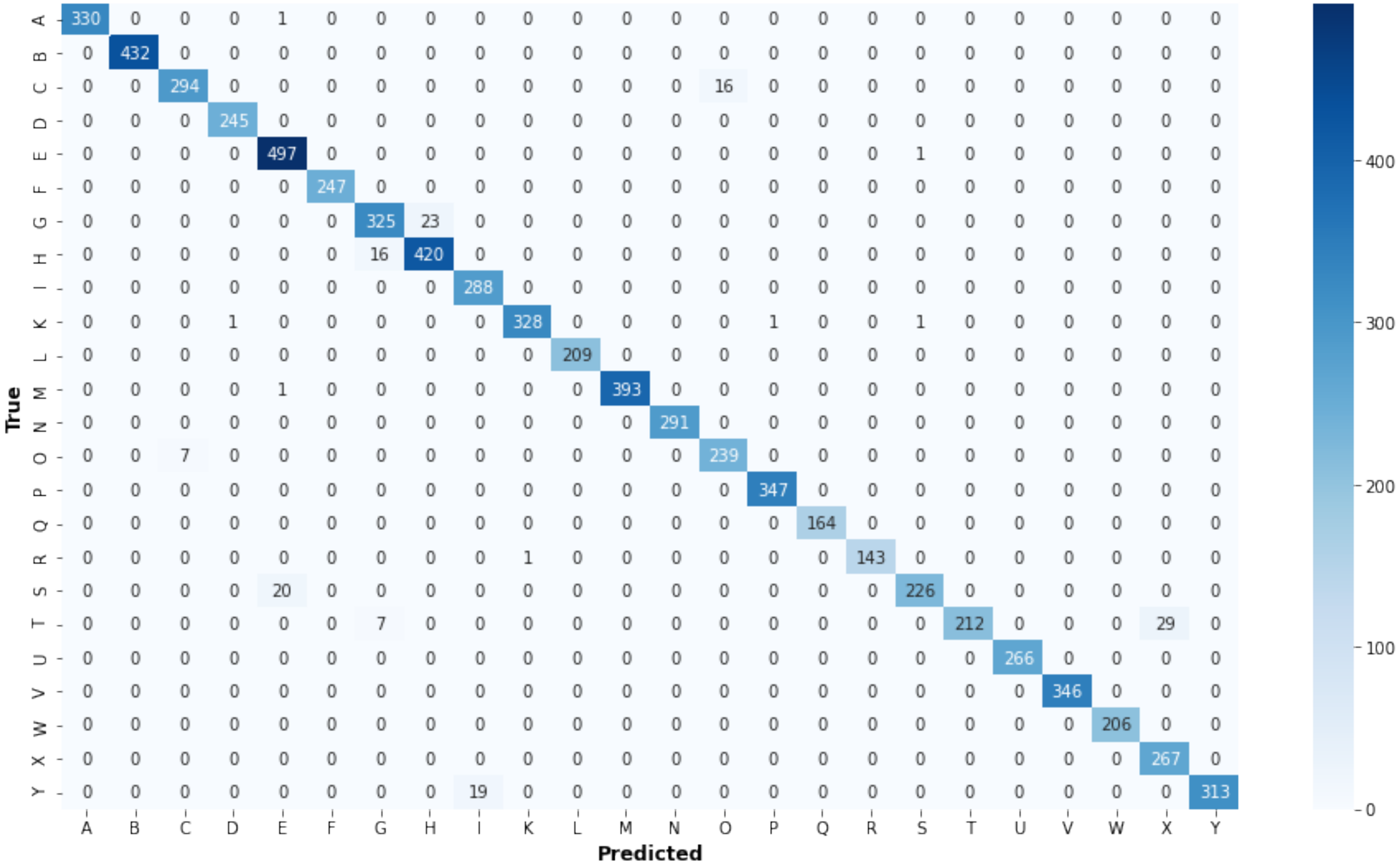
Model

- **CNN** model using **Keras**
- Regularization : Batch Normalization , DropOut layers
- Data Augmentation



97.29% accuracy on Testing Data

Confusion Matrix



Demo

Challenge

As seen from the demo , the model doesn’t perform as well on real world data as it does on the validation data.

Next Steps

- Image Augmentation : Tune the existing parameters and also try more - brightness , for example
- Varied training data : add more images taken in varying conditions

Thank You