Indian-COVID-19 CT Dataset: Evaluating Generalizability of Deep Learning Models - Supplementary File

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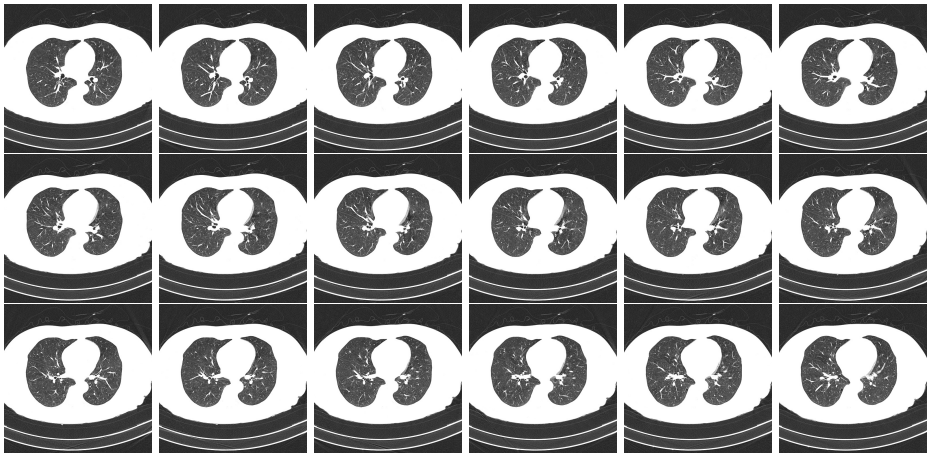

Fig. 1. A representative set of slices from a CT scan from Indian-COVID-19 CT dataset. The study was approved by the institutional review board (IRB) of Gandhi Hospital, Hyderabad. The dataset can be accessed from https://github.com/aleesuss/c19.git. The 3D-volumes of the data will be made available by filling request form available on authors' institute website.

The code for building the model was written using Python 3.7 and Tensorflow 1.14 framework. cuda-10.0 and cudnn-7.6 libraries were used for the execution of the code.

Table 1. Manufacturer Details of the CT scanner machine using which the images in Indian-COVID-19 CT dataset was taken

Key	Value
Manufacturer	SIEMENS
Modality	CT
Manufacturer's Model Name	Emotion 16
Device Serial Number	39306
Software Version(s)	Syngo CT 2014A

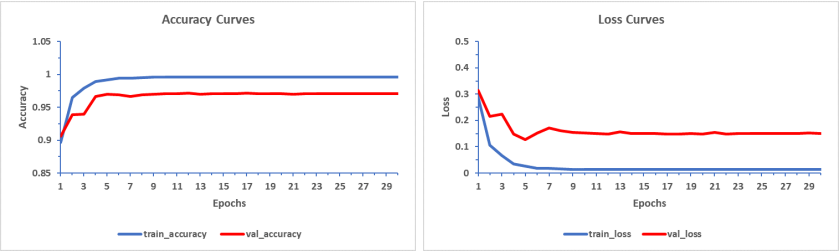

Fig. 2. Accuracy and Loss Curves of CNN model is shown.

Table 2. Average of the accuracies of three experimental runs with 5 and 6 layered models. The version of software and framework used to build, train and test the model is given at https://github.com/aleesuss/c19.git

No. of Layers	Training	Validation	Testing
5	97.8	97.25	96.1
6	99.0	95.67	96.3

Table 3. Experiments were repeated 4 times with COVIDx dataset for 10, 18, 20 and 30 epochs, and the best model was chosen for testing. Resulting accuracies are given

Training	Validation	Testing
99.0	95.0	95.0
99.44	96.11	95.97
99.82	96.11	96.68
99.73	96.20	96.78

Table 4. Confusion Matrix on testing CNN model's performance on Indian-COVID-19 CT data. The code can be accessed from https://github.com/aleesuss/c19.git for reproducing the results

	Covid	Normal	Pneumonia
Covid	9092	2334	670
Normal	264	11954	27
Pneumonia	88	302	7005