В работе предложен метод объединения трех моделей сверточных нейронных сетей для классификации рентгенограмм.

Описание метода

В модели используются три сверточные нейронные сети …\*определить выбор

The overall proposed approach, as summarized in Fig. 6,

includes:

– Consolidate CXR images for healthy subjects, patients

having pneumonia or other bacterial infection and

COVID patients from different sources.

– Retain only frontal CXR images.

– Resize images to a uniform size.

– Divide the images into three portions—training,

testing and validation datasets. One small portion is

retained as validation set to test the efficacy of the

trained model while the remaining portion is divided

into 5 folds. Each time one separate fold is picked up

as test data and the remaining folds as training data.

– While dividing the images into training, testing and

validation sets, ensure that there is no patient overlap

i.e., different images of the same patient is not present

in multiple sets.

– Train the models - DenseNet201, ResNet50V2, and

Inceptionv3 using training set images and do the loss

minimization based on the test set images. Calculate

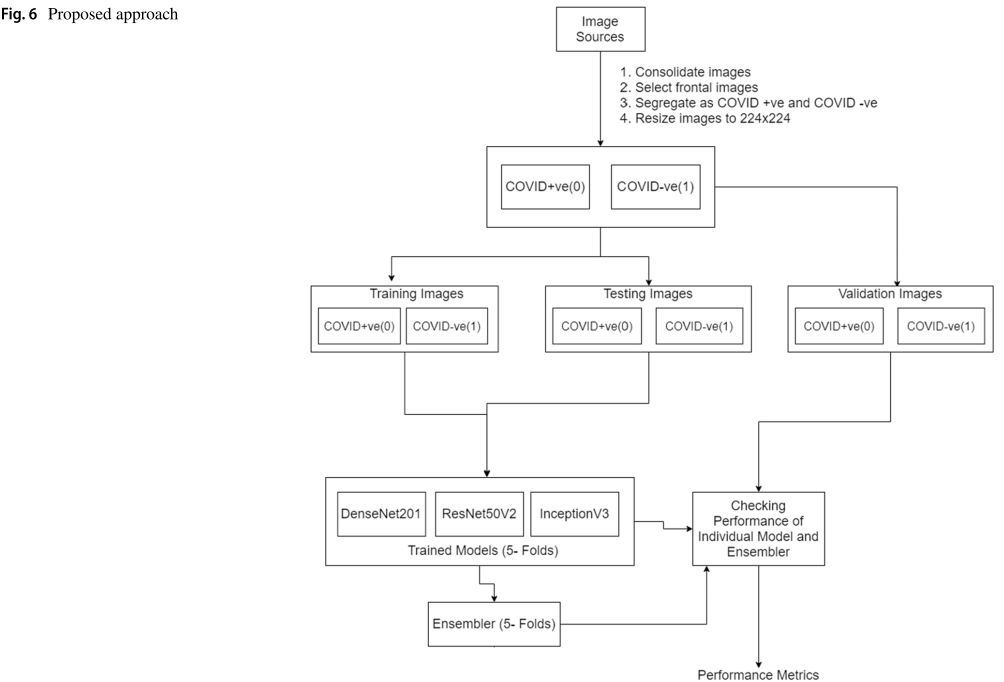
the weights of the 5-fold cross validation based on the

test set.

– Run the trained models on the validation set images

and select class label value 0 or 1 based on weighted

average ensembling of the 3 models.



Показать архитектуры выбранных сетей.

Выбор функций актиаций

Выбор нейронных сетей

-Генерация датасета

Описание датасета Описание структуры датасета

Техническое описание

Используется язык python с библиотеками. На серверах Яндекс. Вместо google Colab

Предоработка

Метрики качества

Сравнение с бенчмарком