TRAIN THE MODEL :

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- Now, let us train our model with our image dataset. The model is trained for 20 epochs and after every epoch, the current model state is saved if the model has the least loss encountered till that time. We can see that the training loss decreases in almost every epoch till 20 epochs and probably there is further scope to improve the model.

- Fit_generator functions used to train a deep learning neural network Arguments:

- • Steps_per_epoch: it specifies the total number of steps taken from the generator as soon as one epoch is finished and the next epoch has started. We can calculate the value of steps_per_epoch as the total number of samples in your dataset divided by the batch size.

- Epochs: an integer and number of epochs we want to train our model for.

- Validation_data can be either: - An inputs and targets list

- - A generator
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  - Inputs, targets, and sample_weights list which can be used to evaluate
  - The loss and metrics for any model after any epoch has ended.
- Validation_steps: only if the validation_data is a generator then only this argument Can be used. It specifies the total number of steps taken from the generator before it is

- Stopped at every epoch and its value is calculated as the total number of validation data pointsIn your dataset divided by the validation batch size.

- HealthifyMe is a leading Indian health and fitness app whose artificial intelligence powered virtual nutritionist, Ria, helps its users regarding their queries around fitness and nutrition in both audio and text in more than 10 languages

- Ria uses key learning's obtained from HealthifyMe's 250 million tracked foods, workouts and 10 million message exchanges between coaches and clients. HealthifyMe supposedly owns the largest data set in this regard and are compatible with popular fitness wearables devices currently available in India

- Neutrino: The platform provides nutrition-based data services, analytics, and technologies to its consumers and wants to turn itself into a leading source of nutrition-related insight platform. To enable individualised compilation of data, the platform uses NLP and mathematical models from the optimation theory and predictive analysis.

- Further, using API and SDK integrations, it enables its partners can purchase data regarding food, nutrition so as to help improve their product offering and services.

- FitGenie: The app heavily relies on AI to produce customised data regarding calorie intake and make food suggestions accordingly. Their advanced diet analysis and combines tools of calorie counter with to make dynamic and adaptive macronutrient adjustments thus providing high-quality nutrient plan each week for its users which is generated from its 1+ million foods.

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## Fitting the model

classifier.fit_generator(
        generator=x_train,steps_per_epoch = len(x_train),
        epochs=20, validation_data=x_test,validation_steps = len(x_test))# No of images in test set
```