How to make an API from your Machine Learning Models

Agenda For this Video:

1. What is API? And Why?
2. Use Cases of Machine Learning APIs.
3. Model Building in Sklearn.
4. What is Flask?
5. Coding a SMS spam detection Model.
6. Saving the model and loading the saved model.
7. Implementing the API in Flask.
8. Testing the API using reqbin.
9. Task For you....

What is API?

API stands for APPLICATION PROGRAMMING INTERFACE.

Before actually coming to API, let us understand what is UI (User Interface).

UI makes the life of user “easier”.
In a similar manner, API, makes the life of software developers “easier”.

API can be of many types:

1) Web APIs = Almost 90%
2) Other APIs

Use Cases of Machine Learning APIs

1. Amazon Machine Learning API
2. BigMl
3. Google Vision API
4. Google NLP API
5. IBM Watson API
6. Microsoft Azure ML APIs
7. and many more..

Model Building in SKLEARN

Let us briefly talk about how does the model building in sklearn looks like:

1) Getting the data.
2) Cleaning the data.
3) Preprocessing the data.
4) Fitting the model by calling fit() method.
5) Using the model by calling predict() method.

What is Flask?

Flask is a Micro web application Framework which provides the python programmers the capabilities to create web applications really quickly and easily.

How does Flask Work?

1) Import Flask
2) Make an application instance
3) Point appropriate route to the app and make a view function after defining the method type/
4) Run the application.

So, let us code a very basic “Hello World” Flask application.

Coding a SMS spam Detection Model....

1) Get the data (Kaggle SMS data)
2) Make a model Pipeline in Sklearn
3) Fit the model
4) Use the model by calling its predict method.

Now that we have created the model, we should now move on to saving the model so that we don’t have to train it again and again….

Now, we have an understanding of:

1) API
2) Flask
3) Saving and Loading the Model.

Let us work on creating the API server...

Let us test the API that we have just creating using a website called reqbin.com.

Task For You

We have just created and tested our API for a SMS Spam Detection Model.

Now, I want all of you to replicate this same exact procedure on a model of your choice that might take more than one parameters.

For example: Build an API for a Linear Regression Model.