CSEN 1085 Web Analytics

Project 2 Report

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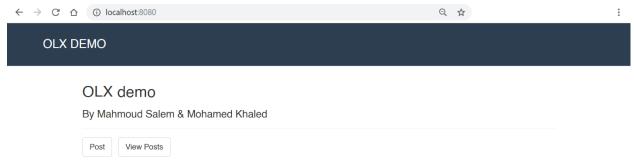
Introduction:

Online marketplace platforms such as Amazon, Souq, OLX and Jumia allow a person to look for posts of items they want to buy, check the information provided by the seller and even see pictures of the item. Many times the user will stumble upon posts with information about the item they want, however the pictures provided either won't contain the item or will be cluttered with other irrelevant objects that may confuse the buyer. This causes problems for both the buyer and the seller, as the buyer won't be sure if this is the item he wants and might end up refraining from purchasing the item. For the seller, they might actually have the item indeed but with false or misleading pictures they might scare buyers away.

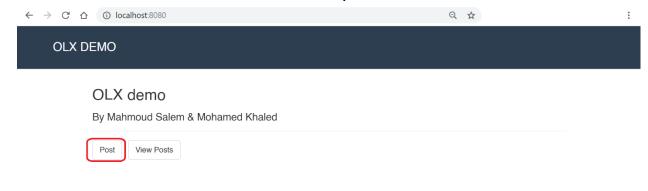
Our proposed idea will make use of an object detection model to scan the provided image for the item in question. If the model is not able to detect the object outright, it will not let the user post his item until he provides a valid photo. If the photo contains clutter and other irrelevant details, the model will scan the photo, locate the object in question and then crop the image to only contain the object. This will lead to less misleading or irrelevant features, and will automate the process instead of requiring manual inspection. In addition, this process will be much faster in taking action than manual inspection.

How to use our platform:

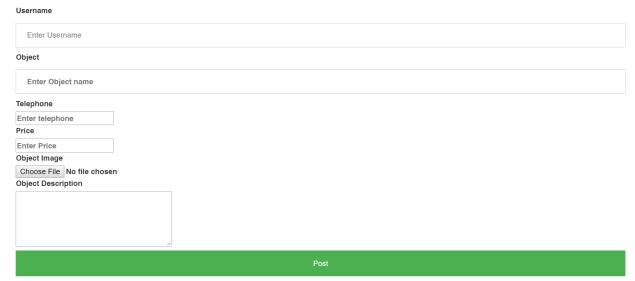
1. Our server runs on the localhost server, on port 8080. Using this, navigate to the homepage:



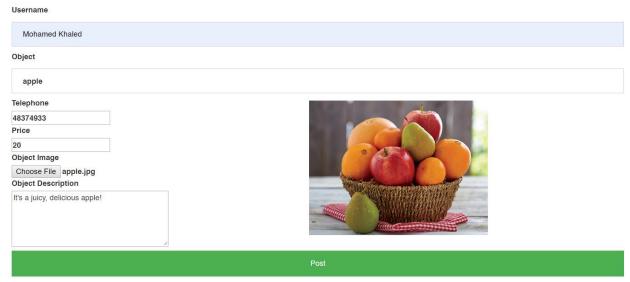
2. Click the Post button to create a new post:



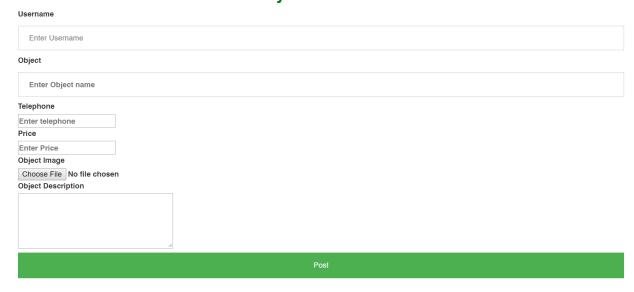
3. Enter your Username, the Object of interest, your Telephone, the item Price and a brief description of the item:



4. Choose a picture of the item to upload:

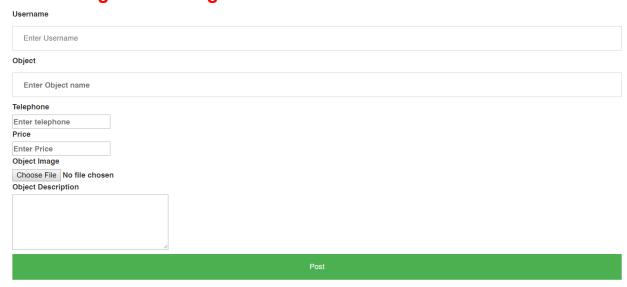


5. Wait for reply. If your post is successful, you will get this reply: You have Posted Successfully

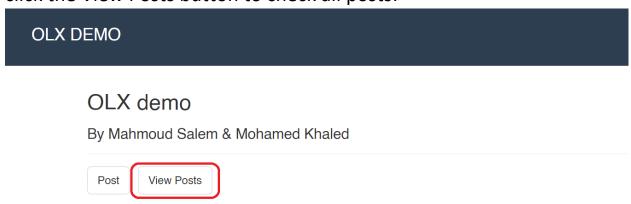


6. If your post wasn't successful, you will get this reply:

Something went wrong



7. Upon a successful post, you can navigate to the home page then click the View Posts button to check all posts:



8. Then you will find your post:





9. An example of multiple different posts in addition to the one above:









Limitations:

- The first limitation is that Coco dataset only supports up to 90 classes of objects to detect. This means that if the user provides an image of an object that is not one of the 90 classes that we support, the model will not be able to recognize the object.
- After the image is detected, the cropping and scaling process might lead to reduction of quality of the image due to the nature of the scaling process
- The name of the object provided by the user might be different than the one in the dataset; For example the user can input Labrador when it would be defined in the dataset as dog.
 - (This can be solved by many platform by making the objects as a pre-defined list. Then adding a new input for more details, such as the object is dog from the list and another input the take the type as Labrador.)

Thank You