ML Web Server Description:

* The server loads the machine learning classification model globally to be used in multiple routes.
* The server has two ways for the user to use the model. The first way (as was specified in this assignment) is through the client CLI. The second way is through the browser using the <http://127.0.0.1:5000/client> route where you can upload files through the file picker.
* The data given to the server can be whatever you pass into the CLI or the browser for the machine learning model to predict.

Testing the Web Server and Clients (on Windows):

**SETUP** Using VS Code (there are also ways to sync requirements.txt dependencies with PyCharm):

1. Download my machine learning model from my github here:
   1. <https://github.com/daniel-pierce/Classification-Model>
2. Go to my project folder and create a virtual environment by running the following command in the terminal:
   1. python -m venv virtual-env
3. Then activate the environment with:
   1. .\virtual-env\Scripts\activate
4. Then install all dependencies that I used by cd’ing to the directory the requirements.txt file is in (should be project dir) and running:
   1. pip install -r requirements.txt

**RUNNING THE CODE:**

1. Run the server code with:
   1. python .\flask-rest-app.py
2. In another terminal (while server is running), run both of the following client scripts to test the project completely. (a) will just print the server info. (b) will print the server info + the image classification:
   1. python .\web-client.py
   2. python .\web-client.py <file path to test image>
      1. NOTE: You must use the test images the professor gave in the rps-validation folder that I included in my submission.

**Screenshots on next page ->**

Screen Captures of Test Run:

Client and Server running together:

A screenshot of a computer

Description automatically generated with medium confidence

Server zoomed in:

Text

Description automatically generated

Client zoomed in:

Text

Description automatically generated