Problem Statement

You are given a set of images of documents, each of which is rotated by one of four angles: 0°, 90°, 180°, 270°. **Build a machine learning model to detect the document rotation angle.**

The data is organised in the following manner:

- `train/*.*`: 203 images to be used for training your model.
- `train/labels`: Train set labels.
- `test/*.*`: 88 images that the model must be evaluated on.
- `test/labels`: Test set labels.

The labels are provided as shown in the following example:

```
AK1.jpg, 0
AK2.jpg, 90
AK3.jpg, 270
AK4.jpg, 270
AK5.jpeg, 0
AL1.jpg, 180
AL2.jpg, 90
AL3.jpg, 90
```

The first column contains the image file names and the second column contains the corresponding rotation angles in degrees.

You may use any technique to solve this problem, **except neural networks**.

You will be evaluated on your understanding of the problem, how you approach it, the assumptions you make and their justification, the techniques you use to solve it, and the quality of your code and other deliverables. Note that you are not provided with a large amount of data for either training or testing, so you will be evaluated on how you overcome the challenges that it poses.

Your solution must contain:

- Your work, including code files, Jupyter Notebooks, etc.
- A `pip requirements.txt` file that includes all dependencies, so that we can set up a virtual environment and run your code.
- A brief description of how you would have solved the problem were you allowed to use neural networks.
- Performance metrics.

Good luck!