1. What do you think it occurred during this model development (trainning & evaluation)?

   Two of the main problems during the training phase could be overfitting and underfitting, both leading to poor predictions. Since the cameras misread the licence plates, this suggests to me that the network did not fit training data well enough, making an excessively simple model caused by underfitting.
   Next, in the evaluation phase, the first idea that comes to my mind is that the loss function that influences the evaluation of the system has not been optimized properly, decreasing the accuracy of the results expected.

2. How would you fix this behavior? Please provide at least 2 options explaining their pros and drawbacks

   A first aim to solve the underfitting problem, proposed above, would be providing the system a larger database to learn with because it is easy to find more content and it does not need too much intervention inside the system. This is an intuitive idea everybody could think of, but the problem of training with a bigger database is the computational cost of it.
   To follow up, I would optimize the model by using the Gradient Descent in order to minimize the loss function and providing us better testing results. But the drawbacks are that the gradients can be very slow, memory demanding and depending on the type of gradient they could not be as accurate as expected.

3. What do you think it will occur when running this AI in a different country with different plates formats? How would you ensure system accuracy?

   Running this AI in a different country can really cause instability and change the predictions the model was trained for.

Nevertheless, a solution could be adding more layers to the model and changing the activation functions leading to an accurate multiple class classification that differentiates between countries.

4. Do you know any OCR (Optical Character Recognition) algorithms (Deep learning based) that could be used here?

   Yes, for instance, the K-Nearest Neighbour, Convolutional Neural Networks or the Hidden Markov Models.

5. Explain a Computer Vision / Artificial Intelligence project in which you have participated (goals, your role, difficulties you found, how they were solved, ...)

   I have done two laboratory sessions by pairs at university about Machine Learning.

   In the first session, we did an introduction to Python coding directed to Machine Learning, to get used to the environment. Some difficulties we found were understanding some parameters declared in the code and its use, but we ended up understanding by reading with attention to the code and by the context.

   In the second session, we did an introduction to Multilayer Perceptrons and Convolutional Neural Networks. In this case, we focused on the accuracy of the system and how by changing some parameters it influenced the result.