

The Journey: ObjectDetection

Challenges: At first I was expecting it to be like the project I did before, “NATURAL LANGUAGE TO PYTHON CODE(<https://github.com/zulrizvi/NL2Py>)” where I trained the model with completely custom dataset, but it was quite different, so the transition was a bit difficult at first but as I moved further it began to get more and easy to grasp and understand, it was more interesting than I thought it would be.

Use of AI tools: Mostly used AI and other sources as well, in order to grasp and learn the ideas and concepts behind the project, generated some codes and understood how It's working and what are the behind-the-scenes ideas, overall, AI helped me to grab the ideas behind how it's working and and the concepts behind the wall.

What I learned:

- How can the Backbone be partially used with detection heads?
- How the images can be loaded from the dataset and import all it's relevant information like bndbox, xmin, ymin, xmax, ymax etc.
- The overall process of object detection works.
- Adding extra layers for the models
- And many tiny concepts related to the field like the kernel, stride, what's happening to the image during the process etc.

Surprising Part: The part that surprised me the most was that it's not as tough as I thought it to be. It was an interesting and great learning experience apart from this, it surprised me how fascinatingly everything can be converted into numbers, though I knew it but experiencing it practically and even working on the project was great.

Code Yourself vs AI: Writing code by self is more satisfiable than generating with AI but generating with AI can be much more useful when you are willing to learn.

Suggestions: We can improve it further by counting how many object it detects, or we can add more classes for predictions, we can also train it for faciall recognition.