Description

This system is built for satisfying most "classification" requirements. The general idea is to use those developed tools to build a stable, easy maintain system.

The core is to use neural network to classify data. Here data can be anything, just need to find out a way changing them into matrix. A picture can be treated as many points on xy-coordinate system, and every position has Red, Green, Blue three color percentage, so this is an x-ray\*y-ray\*R\*G\*B, 5 dimension matrix. A mover is just more pictures put on time line, a 6 dimension matrix. An 3D objects is using xyz-coordinate system so it also has one more dimension than a picture. After transferring a real "object" to a float matrix, all data became the same thing for this system so once the algorithm is built, it can be used on any object.

The neural network can classify an "object" in to specific state very fast, like certain shapes. It won't give a 100 percent result but says the object has xx% to be which state. However when dealing with those objects with multiple states, the only way is setting a limit than gather the first several states which has similar probabilities.

Comparing with Google search and other classification or search engines, it has these advantages:

1. This system doesn't have too much "secrets", so it can be download and lunched offline. When companies using this system on their own database, they don't need to send their data to someone else.
2. This system only stored some matrix for calculation, but not the data itself. So if anyone stole the system files from a company, no data would be stolen together.
3. Artificial Intelligence will keep "learning", automatically adapts the algorithm to fix latest data.
4. Large company has stable, large system. They cannot shut down it frequently to get the latest version, but only update it once a month or even once a season. However this system is quite small so if any updated is made, it can be rebuilt very fast.
5. This system is not using those latest highest technologies, so it doesn’t cost too much on developing which make it cheap.
6. As all the modules and packages are already developed, it's stable enough and can be maintained easily by any python programmer.
7. High adaptability makes this system easily being rewritten for new task.

The disadvantages are:

1. Its working speed is depending on how efficient the server it lunched on is, so it might be expensive is using this system on complex objects as a expensive server is required. Not like using those search engines, those companies have already lunched their system on large servers.
2. The successful rate of classification is unbelievable. It works on the result based on past data, so if a new data is throw into this system; it has no idea and cannot learn the new thing by just one case. For example draw a seven angle star throwing into a system which only dealt with some traditional shapes before.
3. Large amount of training samples is required at the very beginning, just like a child need to learn more. This amount could be over million user cases depend on how complex the object is.
4. This system doesn't have its own database so it can only be used together with other database.
5. The calculation is done by system and it's hard for human to understanding those outcome formulas. It's nearly impossible for anyone wants to make some changes by changing the formulas. The only way to update the system is using new data to train it adapting to those new changes.