

How to run python file

1. ensure python (3) is installed in the system
2. activate virtual environment
3. provided is a requirements.txt containing all the packages used. Install with `pip install -r requirements.txt`
 1. The file will need to be updated if code is updated with new packages. Do `pip freeze > requirements.txt`
4. If all packages are installed the file can be run with `python aoda.py`

Compile to exe

The following is significant for compiling the project into a single exe file without any additional items. Pyinstaller was used to create the exe and should be already installed as it is included in the requirements.txt

There is a function in aoda.py called `gPath`. All external assets such as images that are opened by the aoda.py need to have their file path passed through `gPath` in order to work both in the python file and also in the exe

To get everything into one exe, pyinstaller will package all external asset files into the exe, which when run, will unpack them into a temporary file in the user's `appdata\local\temp` folder called `_MEI.....`

The `gPath` function will change the asset path to the one in the MEI folder when the code is run as exe allowing it to work as the python file and as exe. Any external file such as image or text file must be opened with the file path passed through `gPath` or it will not be possible to compile into a single exe. If this is not done then the images must also be provided alongside the exe in order for it to be able to find them.

How to compile to exe

1. Run `pyi-makespec -D -w aoda.py`
 1. this will create a file called `aoda.spec`. open the spec file in an editor
 2. the `-D` specifies compiling to a single exe and the `-w` specifies the exe should run without a command window
2. In the `aoda.spec` file, there will be a line at the beginning with `a = Analysis(...)` and a long list of kwargs. The one that needs to be edited is `datas=[]`; it currently is an empty list. All assets that need to be compiled will be added in the list
3. Add all assets files to `datas`. Each file should be in a two item tuple, with the first item being the path to the file and the second being the intended path of the file after being unpackaged when the exe is run. In this case it must be `"."`
 1. Example of finished list: `datas=[("AODA.png", "."), ("mohLogoM.png", ".")]`
 2. `"."` represents the current folder. When unpacked, the 2 images will be located directly in `appdata\local\temp_MEI.....\`. This is where `gPath` expects them to be. Using something else will put them in a subfolder of that name and will require modifying `gPath`
4. run pyinstaller on the spec file with `pyinstaller aoda.spec`
 1. pyinstaller will create 2 folders, `build` and `dist`. Inside `dist` will be the final exe