

# Epigenetics AI Coding Details

## Structure:

### Files:

#### GUI.py:

in `GUI.py`, this is the graphical user interface. This program uses the modules `tkinter`, `sys`, `os` and `importlib`. In this file, it will handle the file upload, run the detection for cancer, and get the cancer type for the user. Now when the user runs the detection for cancer, depending on the users input for the type of cancer, it will run the correct file in the `types_experiment` folder. After, the program will also output 2 variables made in the cancer type files.

#### Types\_Experiment:

This is the folder containing each individual AI for each of the different cancer types [ Brain, Lung, Prostate, Bone Marrow/Blood, Breast, Kidney].

#### Cancer Type Files:

In each separate file, an AI that learns how to detect whether or not the cancer sample will lead to cancer. To ensure accuracy, 2 variables will be made so that the AI can add the chances of the sample leading to cancer out of 100 scenarios, and also how accurately it was able to scan/analyze the picture of the cancer DNA sample given.

## In Types\_Experiment:

### Brain.py:

#### Class Name: Brain

### Lung.py:

Class Name: Lung

**Prostate.py:**

Class Name: Prostate

**Bone Marrow/Blood.py:**

Class Name: Bone Marrow/Blood

**Breast.py:**

Class Name: Breast

**Kidney.py:**

Class Name: Kidney