

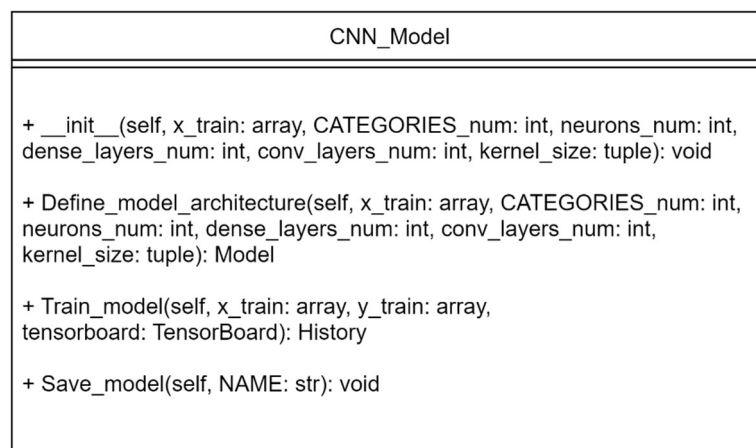
## Criterion B: Design

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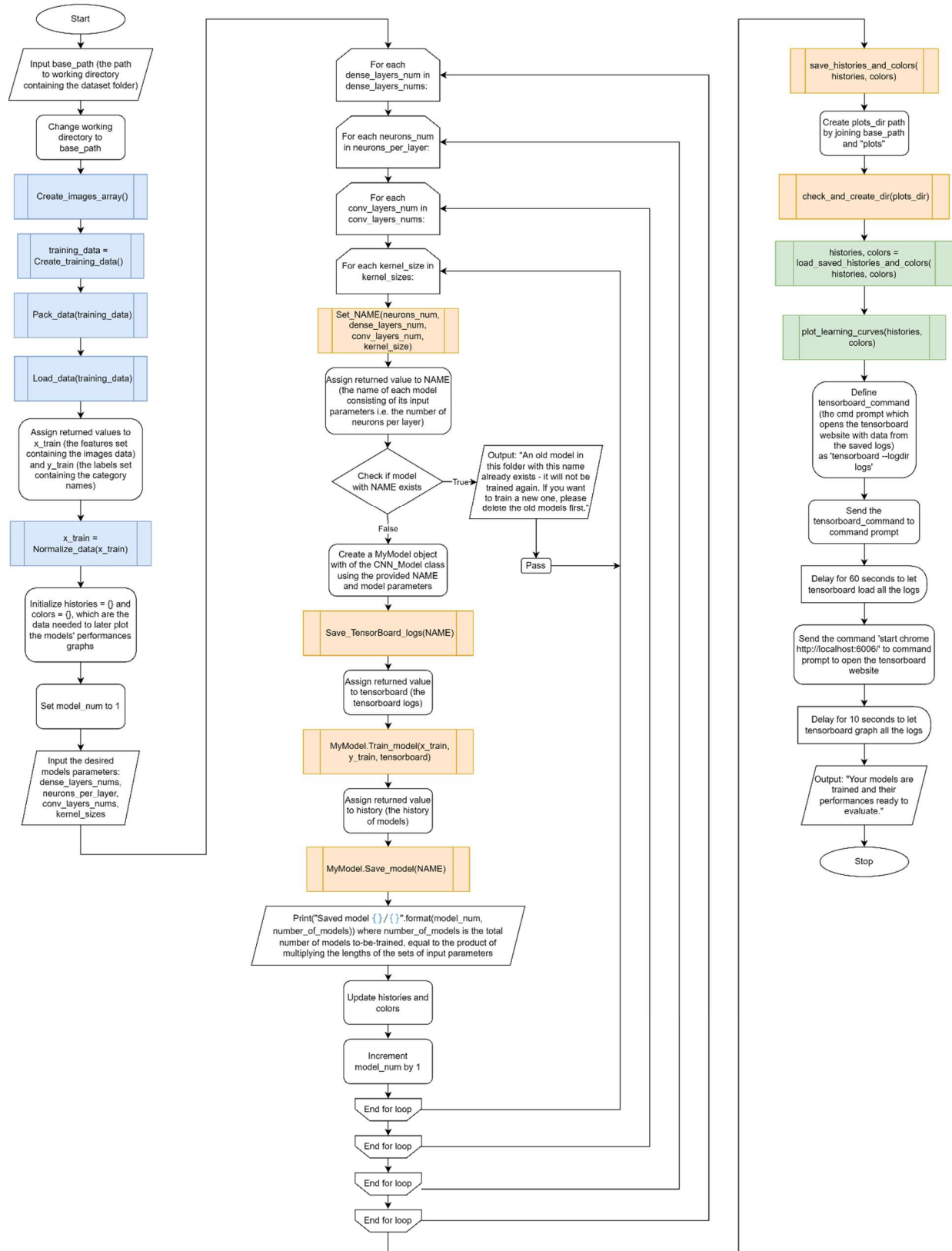
The planned, desired outcome is to create the two pickle files, X (the features set) and y (the labels set), and the four folders in the working directory, as listed in the image below – the ‘logs’ folder containing tensorboard logs, ‘models’ folder containing the trained and saved models, ‘plots’ folder with the pyplot graphs of the models’ learning curves and performances, and the folder with the dataset itself.

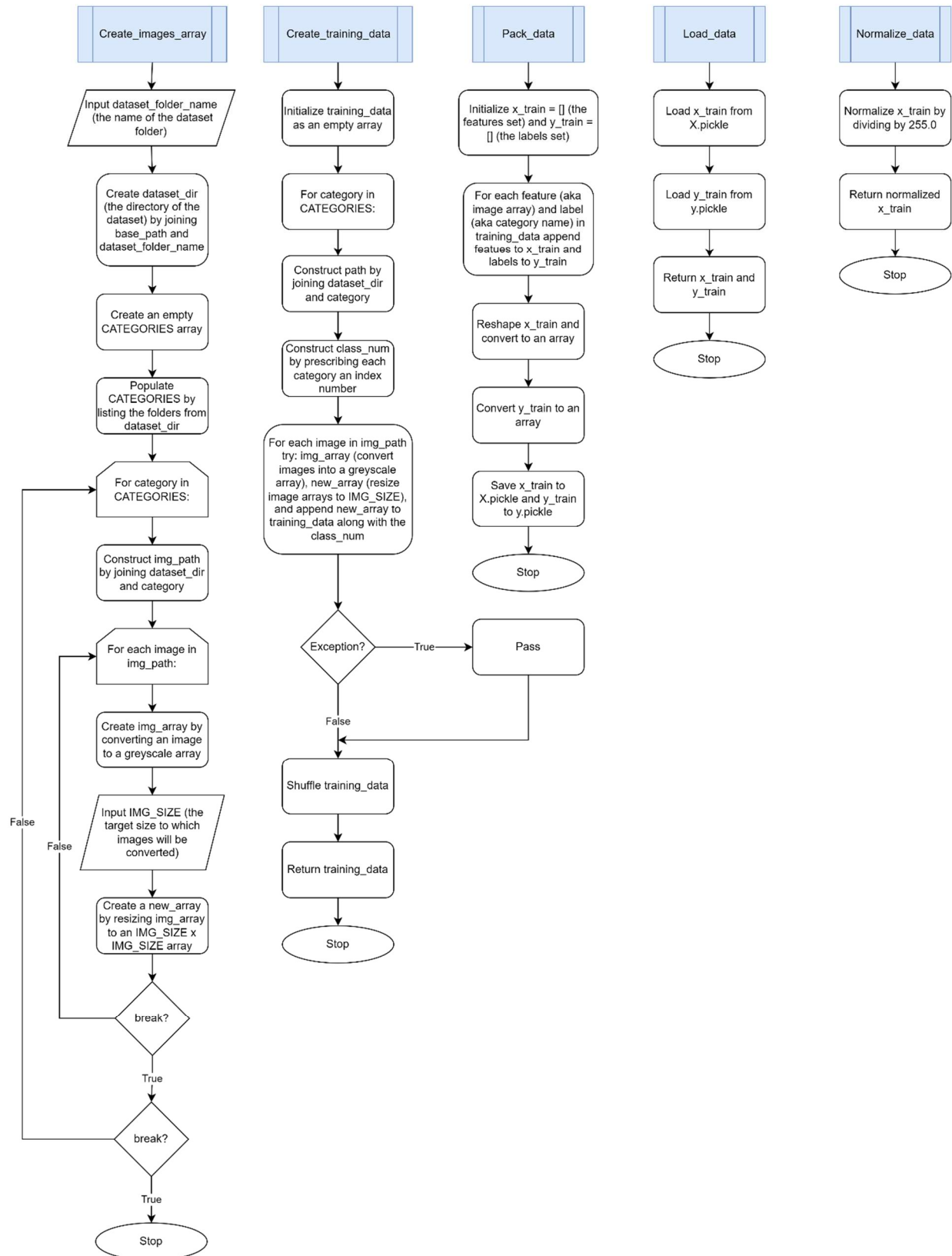
<input type="checkbox"/> Name	Date modified	Type	Size
logs	2/22/2024 12:00 PM	File folder	
models	2/22/2024 12:00 PM	File folder	
plots	2/22/2024 12:01 PM	File folder	
SolvaDataset_200_v3	2/14/2024 10:06 AM	File folder	
X.pickle	2/22/2024 11:47 AM	PICKLE File	7,208 KB
y.pickle	2/22/2024 11:47 AM	PICKLE File	12 KB

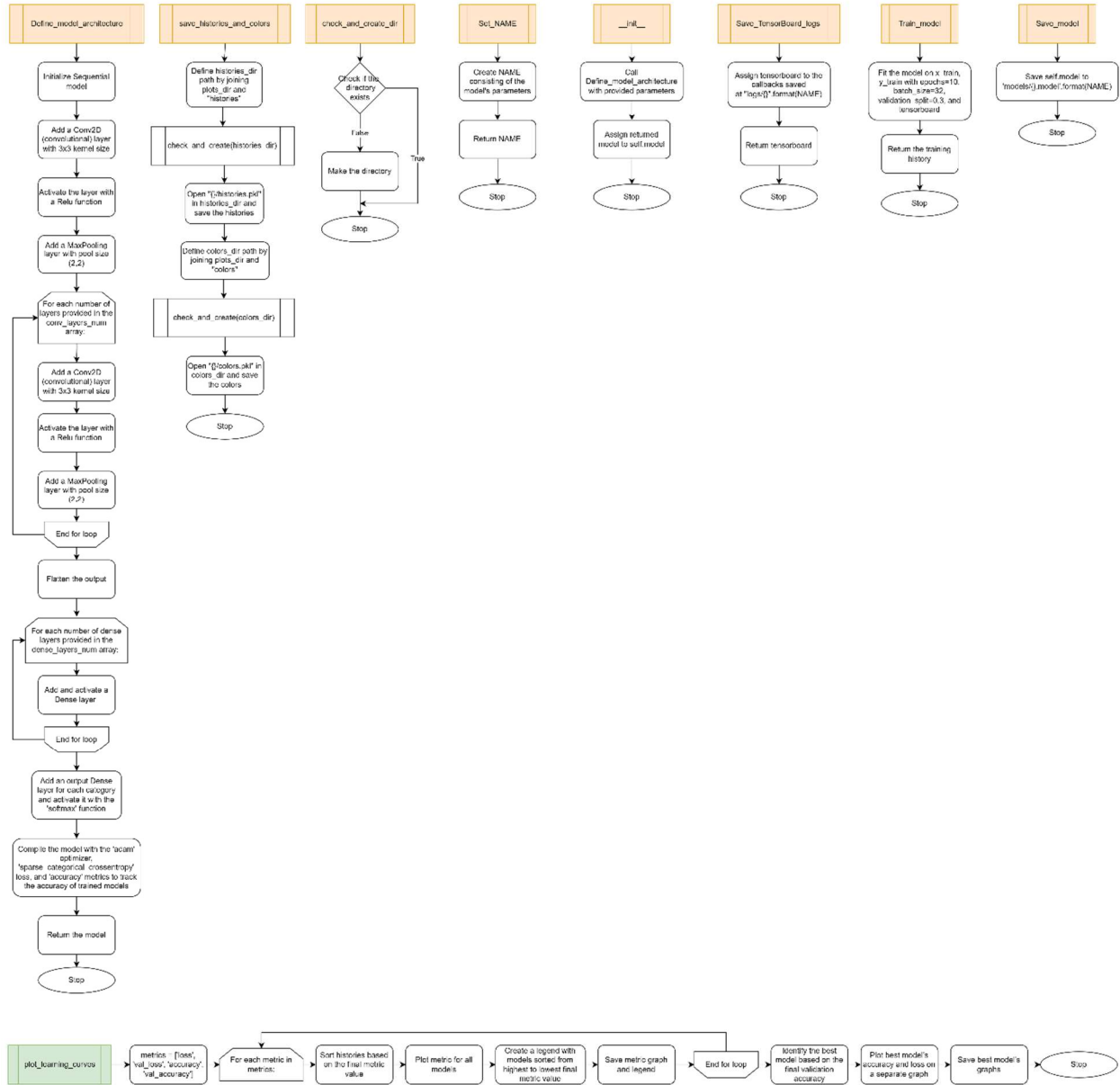
The main functions responsible for defining the architecture of neural network models, training them, and saving, grouped into a CNN\_Model class - the UML diagram:

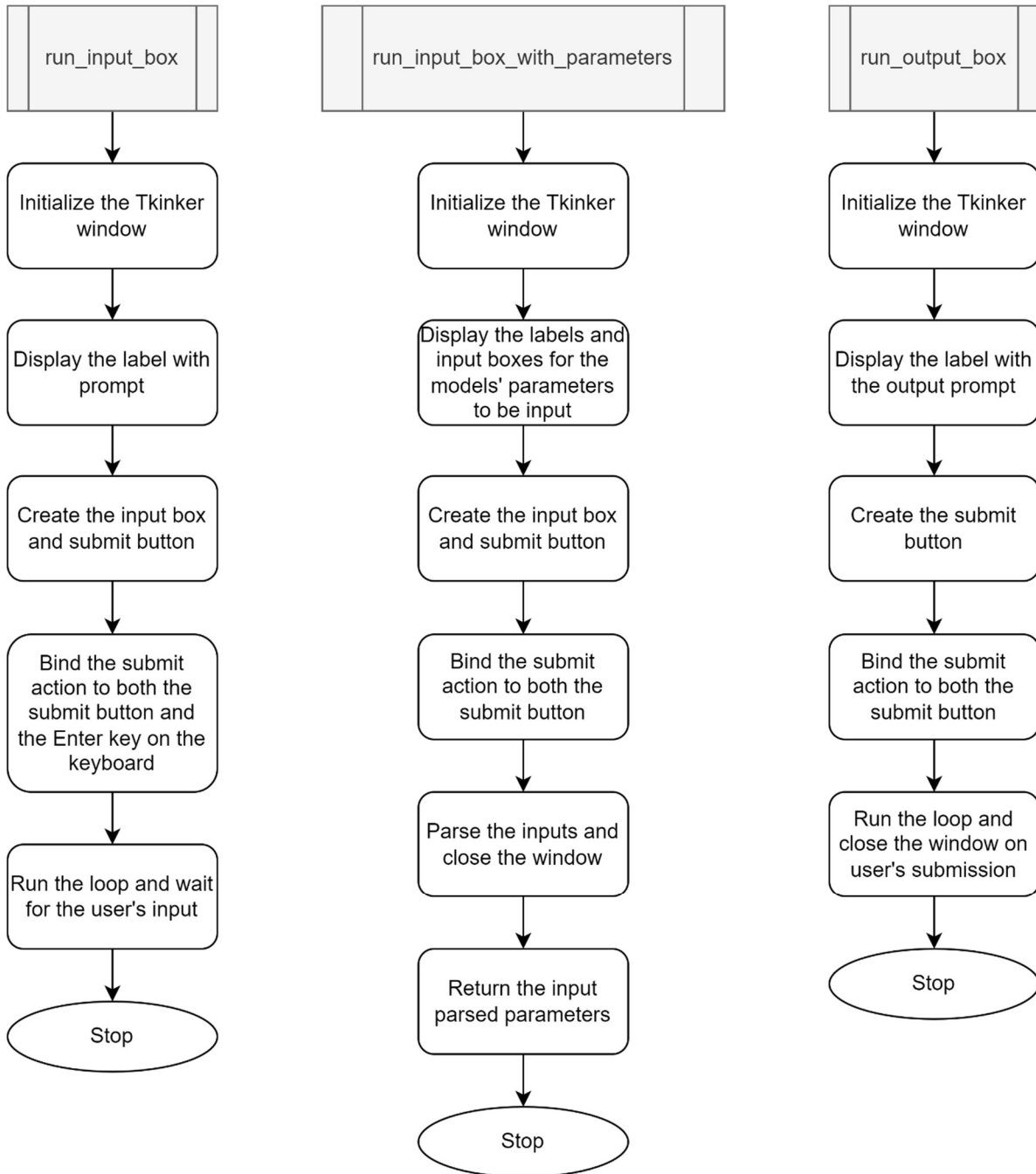


Flowchart of the whole program (with color-coded division of the program into smaller, more manageable Python files, as follows: `reprocessing_data.py`, `models_training_and_optimization.py`, `plotting_learning_curves.py`, `GUI_Tkinker.py`):









Word count: 120