

Brief Description:

This directory contains the following files:

- `Assignment_1B.pdf`: Description of problem statement
- `PercentageIncreaseCOVIDWorldwide.csv`: Contains the data used for training the Decision Tree Regressor
- `model.py`: Contains all the necessary functions and implementation of ID3 Algorithm for Regression problems
- `problems.py`: Contains the solution to problems provided in the `assignment.pdf`
- `requirements.txt`: Contains all the necessary dependencies and their versions
- `utility.py`: Contains all the helper functions used by the above files (if any)

Directions to use the code

1. Download this directory into your local machine
2. Copy the `PercentageIncreaseCOVIDWorldwide.csv` file in the Source Code Directory
3. Ensure all the necessary dependencies with required version and latest version of Python3 are available (verify with `requirements.txt`)
`pip3 install -r requirements.txt`
4. Run specific functions with the aid of `problem.py`
`python3 problem.py`
5. The image of the final decision tree will be created in the same directory as the Source Code

For giving the input height for the Question 1

- Using the default full height
`python3 problems.py`
- Giving input height (say 5) -- height should be a positive integer or -1
`python3 problems.py --height 5`
- For more help regarding the arguments
`python3 problems.py --help`

For Windows Users

1. Make sure Graphviz is installed
 - `Install chocolatey`
 - `choco install graphviz`
2. Make sure Graphviz is added in the PATH

For Linux Users

1. Make sure Graphviz is installed
 - `sudo apt-get install graphviz`