Land use optimization using PI-NSGA-II

1. Please download anaconda or conda (lighter version of anaconda) on your desktop.
2. Open anaconda_prompt within anaconda.
3. Navigate to the folder where you want the code: < cd /path/to/your/projects >
4. Clone the repository containing the implementation of PI-NSGA-II in land use optimization via: < git clone https://github.com/aditisinghxd/pinsga2.git >
5. Once cloned, navigate within the cloned folder via: < cd pinsga2 >

Creating an anaconda environment to run the code within

6. Create a new environment: < conda create -n pinsga2env python=3.9 -y >

   You can also name the environment as suited: < conda create -n <env_name> python=3.9 -y >

7. Activate the environment: < conda activate pinsga2env >
8. Clone the pymoo repository (containing PI-NSGA-II algorithm) via: < git clone https://github.com/Human-Centered-Optimization-Lab/pymoo-pi-emo.git >
9. Once cloned, navigate within the pymoo folder via: < cd pymoo-pi-emo >
10. Switch to the PI-NSGA-II branch via: < git checkout feature/pinsga2 >
11. To be done outside anaconda: replace the pinsga2 file within the folder pymoo-pi-emo\pymoo\algorithms\moo with the pinsga2 file stored within the folder update_pinsga_file_in_pymoo-pi-emo
12. Once done, continue within anaconda_promt: < pip install . >
13. Install pandas within the environment: < conda install pandas -y >
14. The environment is now setup. Navigate back to the main folder: < cd .. >
15. Since the environment is already currently active, you can directly run it using: < python landusepinsga2.py >

Note: For future use, simply activate the environment (step 7) and run the landusepinsga2.py (step 15).

To edit the file and set new parameters use: notepad landusepinsga2.py or a code editor of your choice.