# Source Code Management

All source code for the project is managed through the Chameleon Company’s GitHub account with both the MOP repository, the MOP-Code repository, and the handover documents repository owned by this account. Figure 11.1 below illustrates the two primary repositories specific to the City of Melbourne project including software used for managing source code.

Figure 11.1: Source Code Management & Version Control tools



All non-source code files or artefacts may also be stored in the teams MS Teams Channel Files folder under the directory named after your project and trimester e.g., **"City of Melbourne T1 2022"**. The MS Teams File folder should be used for MS Office documents, video, audio, images, or other assets not forming part of the web application or Public GitHub deliverable. GitHub is used to manage your local cloned copy of the GitHub repositories.

Source code for the web application is developed in Microsoft Visual Studio Code.

Jupyter Python Notebooks may be designed and developed in Jupyter Notebook.

Table 11.1 describes the primary top-level folders in the GitHub MOP-Code repository.

Table 11.2 describes the primary top-level folders in the GitHub MOP repository.

Table 11.1: GitHub MOP-Code Repository Structure

| Folder | Description |
| --- | --- |
| data science | All artefacts produced by the data science sub team. |
| ETL | Code for data transformations relating to moving and accumulating open data in the web app. |
| FAQ Document files | Files related to publishing the FAQ in the Web App. |
| google\_cloud\_test | Files for testing connectivity and use of docker with Google Cloud Platform. |
| Playground | Location for storing individual WIP files not yet ready for assembling into team deliverables. |
| Prior Work | Artefacts from prior trimesters. |
| public\_github\MOP | Contains a copy of the contents of the GitHub folder for the MOP repository. The MOP Repo is replicated here since Bitbucket is the only source control system recognised by the Deakin DISC program. Thus, all changes to the public GitHub repo should be committed in this subfolder first before being pushed to the public GitHub folder. |
| webapp | Artefacts created by the web sub team for implementation of the Melbourne Open Data Playground web application. |

Table 11.2: GitHub MOP folder structure

| Folder | Description |
| --- | --- |
| example\_notebooks | All example Jupyter notebooks are stored under this folder. |
| \condaconfiguration | Contains instructions for setting up a Conda Environment with the required packages for use case development. |
| \dataanalysis | Contains Jupyter notebooks for exploratory data analysis of City of Melbourne Open Data Sets. |
| \tutorials | Notebooks demonstrating specific data engineering and data science techniques. |
| \usecases | Notebooks corresponding to the use cases published in the Melbourne Open Data Playground web application. |
| images | Images used on the home Readme page are located here. |
| opendataapi | Open Data API python command line functions are in this folder. |