mypower

Supplementary function and port of MATPOWER in Python, powered by octave via oct2py.

Requirements

Octave (Tutorial for Windows 10)

1. Download octave.
2. Install octave, and write down the installation destination path.

   `C:\Program Files\octave-7.3.0-w64`

3. From the installation destination path, find the **octave client path**, that is the path to `octave-cli.exe` under `mingw64\bin\` folder. Copy the path.

   `C:\Program Files\octave-7.3.0-w64\mingw64\bin\octave-cli.exe`

4. Open Environment Variable. You can access it by pressing Windows-Key, type `edit the system environment variables`, and press Enter to search.
5. Click `Environment Variables`.
6. Under `System variables`, click `New...`.
7. Fill the `Variable name` with `OCTAVE_EXECUTABLE`, and `Variable value` with the **octave client path**.

   Variable name: `OCTAVE_EXECUTABLE`

   Variable value: `C:\Program Files\octave-7.3.0-w64\mingw64\bin\octave-cli.exe`

8. Restart (not shutdown, but restart) the computer to make `os.environ` recognize the new path.

oct2py

1. Install `oct2py` from python PyPI using a command prompt.

   ```
   pip install oct2py
   ```

2. Check `octave` and `oct2py` installation by running the below python code.

   ```
   from oct2py import octave

   octave.path()
   ```

MATPOWER

The recommended way to install MATPOWER from python is using matpower-pip.

```
pip install matpower
```

If you already have MATPOWER installed, you can pass the path to mypower when starting matpower instance.

Usage

To use oct2py based MATPOWER, use:

```
import mypower as myp

m = myp.start_matpower()
mypc = m.runpf(nout=1) # nout specify number of returned variable from Octave
```

See the tutorial for a detailed example.

Citing `mypower`

We do request that publications derived from the use of `mypower`, explicitly acknowledge that fact by citing the appropriate paper(s) and the software mentioned in MATPOWER publication and the following citation:

> M. Yasirroni, Sarjiya, "mypower: Supplementary function and Python port of MATPOWER", GitHub, 2021. [Online]. Available: https://github.com/yasirroni/mypower.

If a journal publication from the author appears, it also needs to be cited.

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See also the list of contributors who participated in this project.

Feel free if you want to contribute.

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