# Installation and Usage Guide of the **POSample** Package

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## 1 Installation

1. Make sure to download the **Python 3.9.7** from here, otherwise we will have an error about "distutils" package which is deprecated and removed in the latest Python version



Figure 1: Python Version 3.8.0 for Windows (64-bit)

2. Execute the downloaded file. Ensure to check the box in the first page of the installer that says "Add Python 3.9 to PATH".

3. Next, to install the POSample package if we have the Internet connection, type the following code in the terminal:

```
git clone https://github.com/HongyuMou/POSample.git
cd POSample
pip install .
```

where the first line requires an internet connection to work, and all the required dependency packages would be installed at the same time.

On an **offline** server where Python 3.9.7 is prepared, steps are:

(a) Unzip the "POSample" package

(b) Download and install the dependencies separately. The list of them are located in "memo/requirements.txt"

(c) Navigate to the directory where you unzipped the package using "cd unzipped_POSample_directory"

(d) Use the command: 'pip install .' This command tells 'pip' to install the package located in the current directory. If 'pip' is not installed, you might need to install it first

4. After a successful installation, type "py" in the terminal to enter into the Python environment.

Figure 2: Command Illustration for Installation

# 2 Example Usage

1. In the python environment that we just opened, type:

```
from POSample import POSample
csv_file_path = 'POsampleDGP_simul_example.csv'
POSample(csv_file_path)
```



Figure 3: Command Illustration of Example Usage

2. After waiting for around two minutes for this simulated two program example (each program has 100,000 obs), the following results for each program will be automatically generated in the same "POSample" folder

- Logfile of output: "POSample_output_logfile.txt"
- Coefficient and Std tables: tables folder
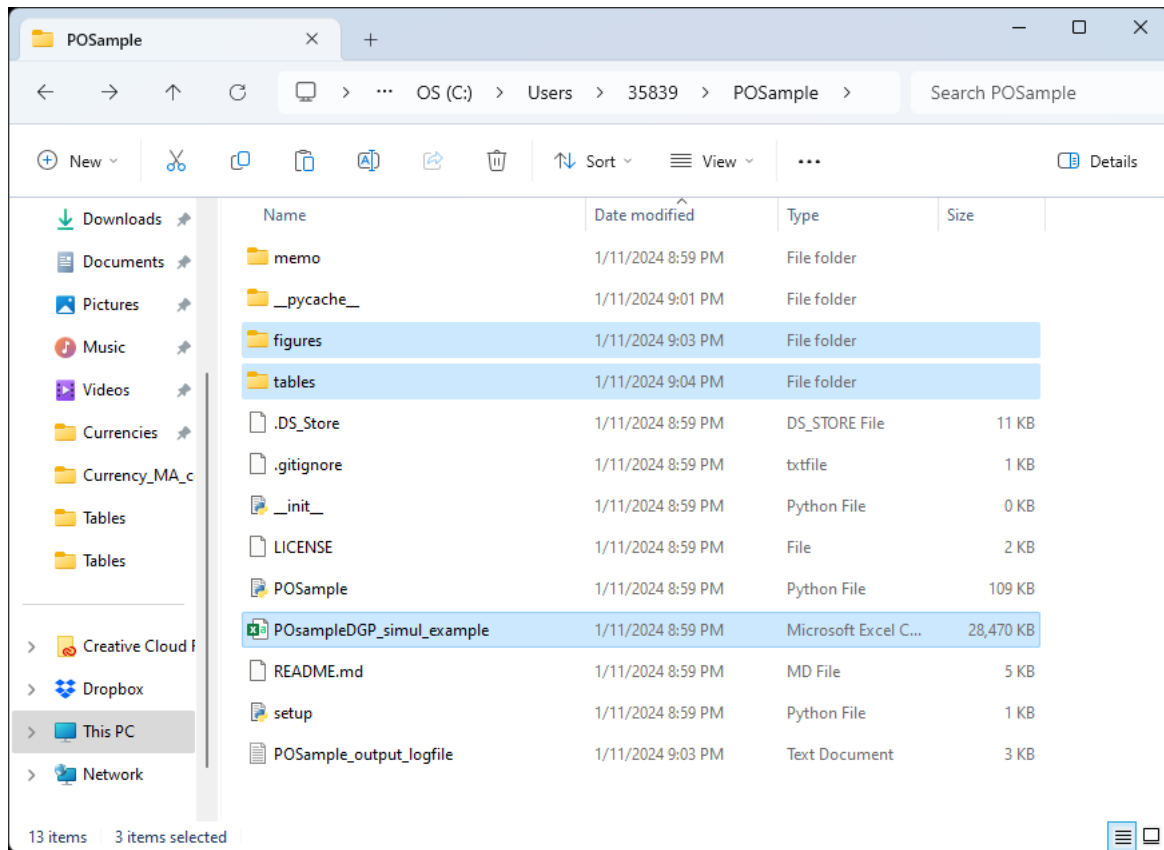- Figures: figures folder

Figure 4: Results Location of Example Usage

3. In the "memo" folder, I put the PDF results for program 0, which tells in detail about how each regression and figure would fit into our analysis.