TransLink RTM3

Data Extraction Tool - Documentation

October 28th, 2019

Purpose

- The data extraction tool was developed to assist data collection from RTM model runs. Variables-of-interest are outlined in an Excel spreadsheet, and then fed into python tool to drive RTM data manipulation and export to database outside of EMME environment.

Data Extraction Tool Steps

1. Add desired variables in Variables_of_interest.xlsx spreadsheet

2. Specify *Sheet* name, run the tool
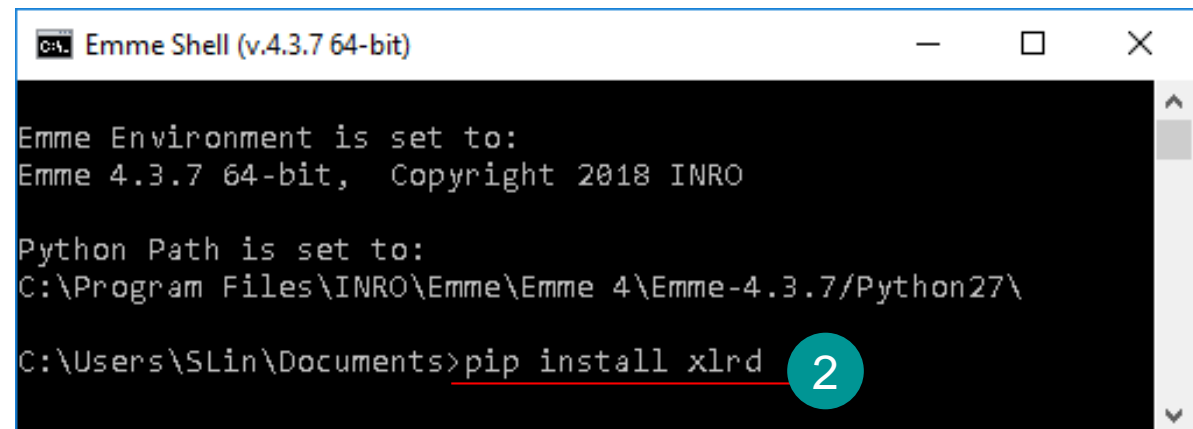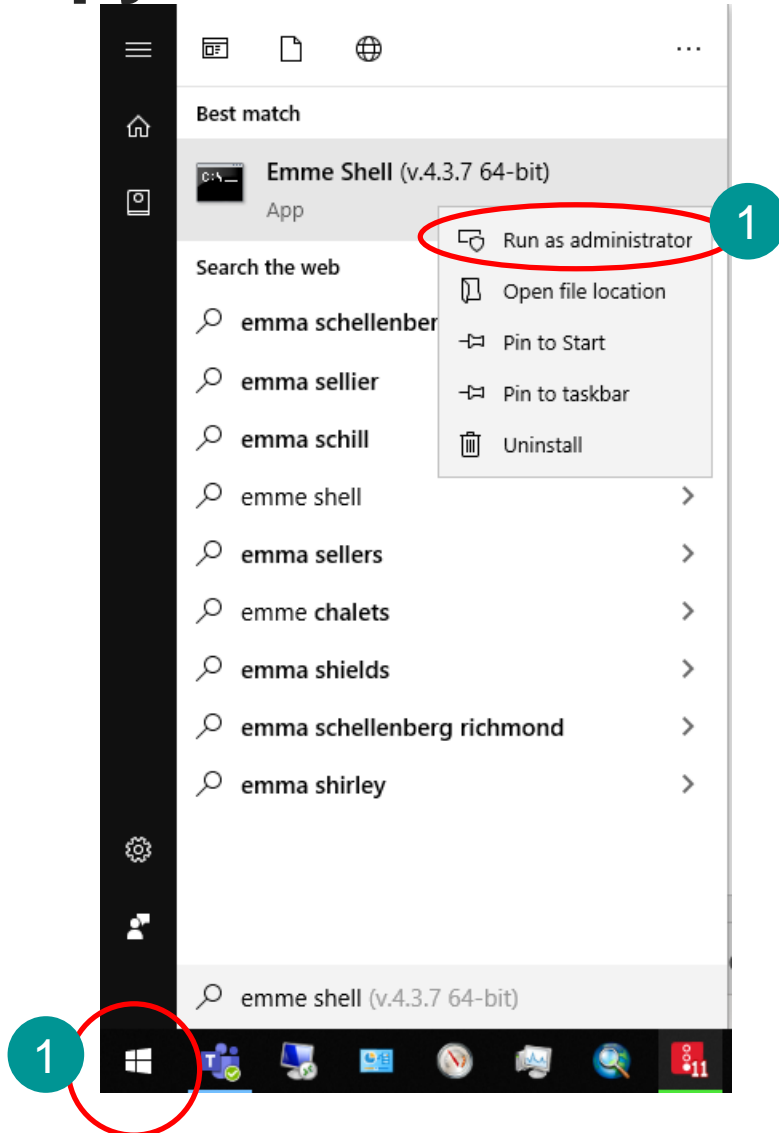
3. Outputs are saved as SQL database

Pre-requisite: install xlrd library to EMME version of python

By Default, EMME version of python does not support excel file input. To fix this issue:
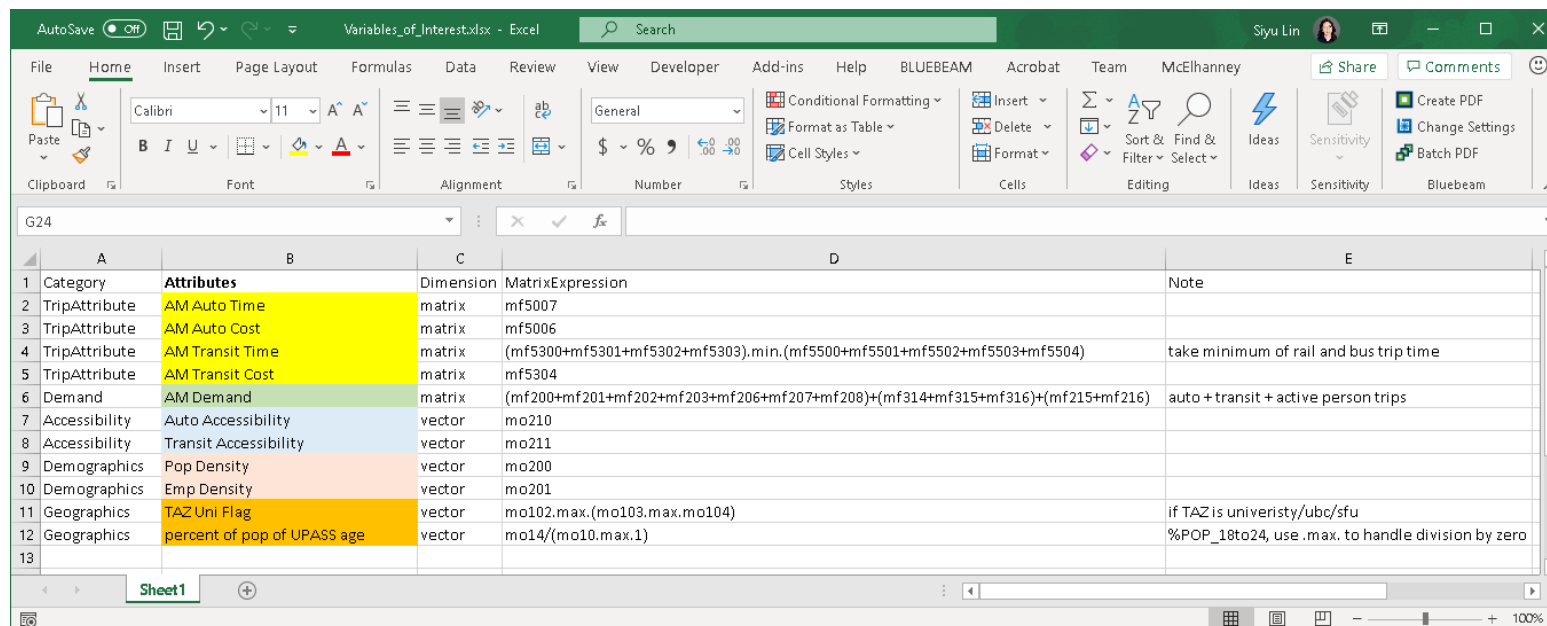
Step 1: from Windows menu, open Emme Shell as admin (right click > run as administrator)

Step 2: pip install xlrd

Step 1: Add desired variables in Variables_of_interest.xlsx

- *Category*: SQL Table name
- *Attributes*: SQL Table column heading
- *Dimension*:
  - matrix: mf data - to be saved as long table (i, j, attribute)
  - vector: mo data (i, attribute)
- *MatrixExpression*: EMME Matrix Calculation Expression
- *Note*: description of the variable/comments, no impact on the output results

	A	B	C	D	E
1	Category	Attributes	Dimension	MatrixExpression	Note
2	TripAttribute	AM Auto Time	matrix	mf5007	
3	TripAttribute	AM Auto Cost	matrix	mf5006	
4	TripAttribute	AM Transit Time	matrix	(mf5300+mf5301+mf5302+mf5303).min.(mf5500+mf5501+mf5502+mf5503+mf5504)	take minimum of rail and bus trip time
5	TripAttribute	AM Transit Cost	matrix	mf5304	
6	Demand	AM Demand	matrix	(mf200+mf201+mf202+mf203+mf206+mf207+mf208)+(mf314+mf315+mf316)+(mf215+mf216)	auto + transit + active person trips
7	Accessibility	Auto Accessibility	vector	mo210	
8	Accessibility	Transit Accessibility	vector	mo211	
9	Demographics	Pop Density	vector	mo200	
10	Demographics	Emp Density	vector	mo201	
11	Geographics	TAZ Uni Flag	vector	mo102.max.(mo103.max.mo104)	if TAZ is univeristy/ubc/sfu
12	Geographics	percent of pop of UPASS age	vector	mo14/(mo10.max.1)	%POP_18to24, use .max. to handle division by zero
13					

Step 2: Specify *Sheet* name, run the tool
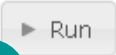
Step 3: Outputs are saved as SQL database
Variables_of_Interest_Results.db

Category

Attributes

Matrix data