

Standard
Operating
Procedure

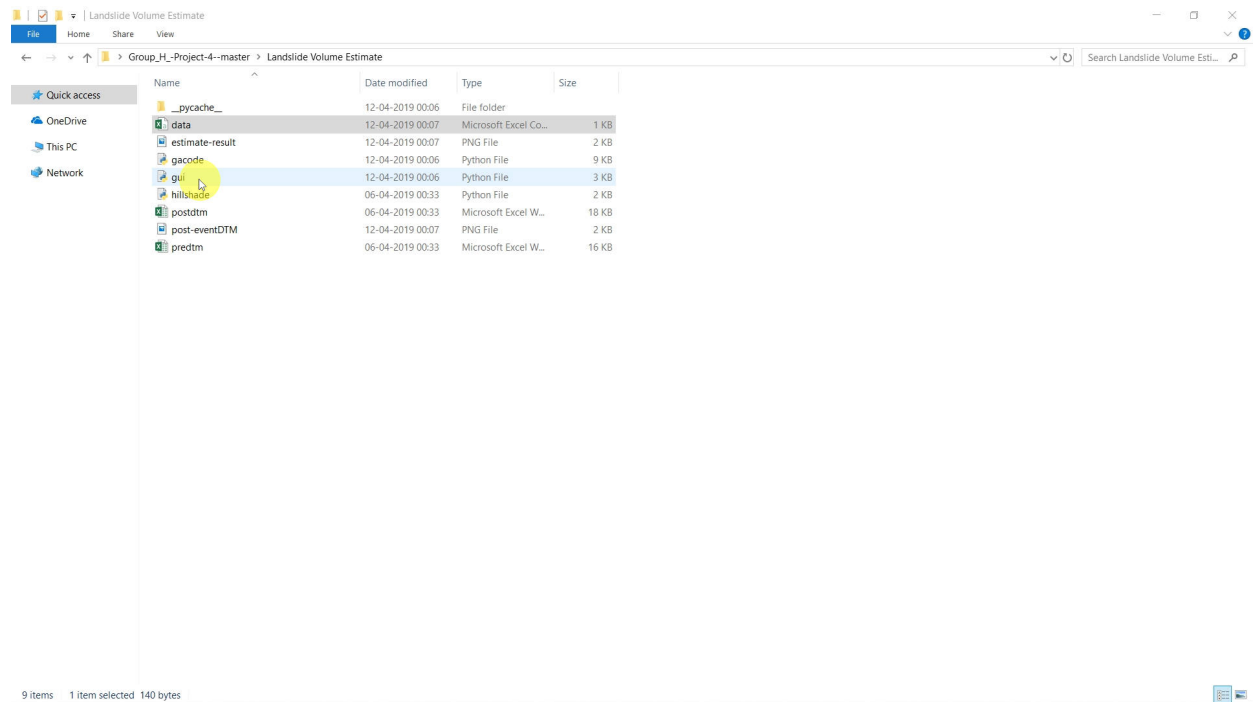
LaVA

Landslide Volume Approximate
--Tutorial guide for LaVA

I.I.T. Indore

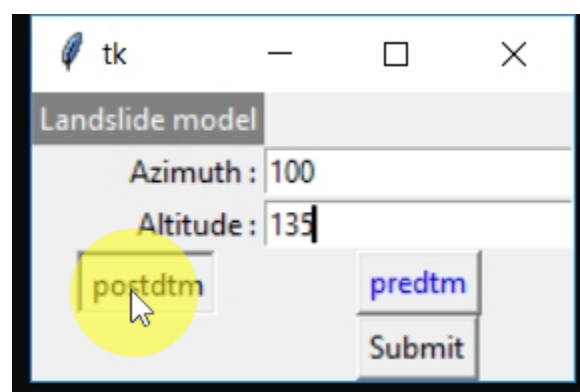
Owner: Tanmay Singh,
Ashutosh Anshul, Vikash
Kumar, Rohan Patel

Run .py file



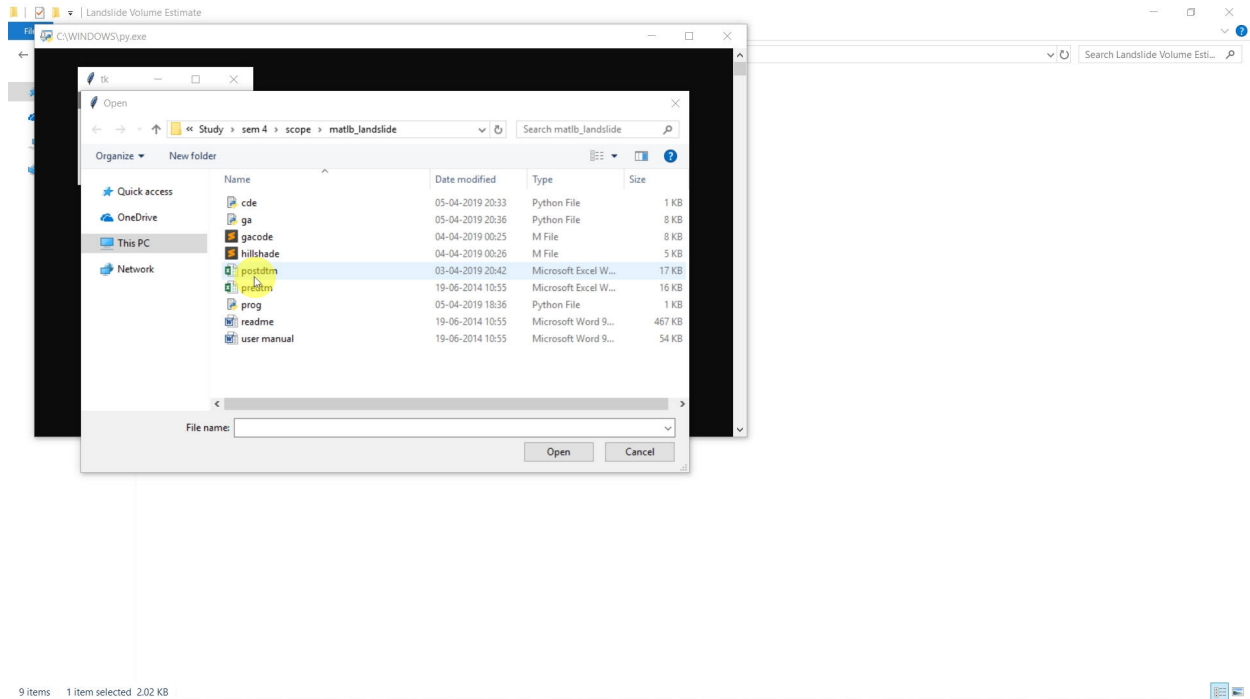
Details Entry

- Enter the altitude and angle of capturing terrain photo.
- Select post DTM



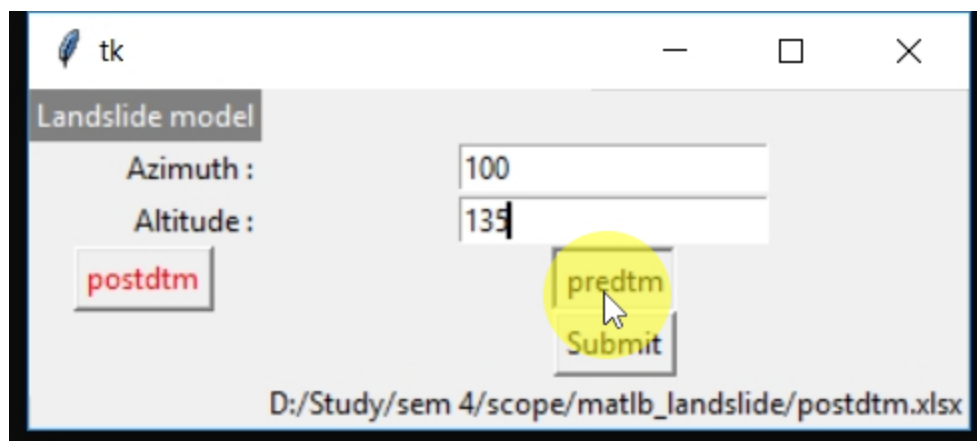
Post DTM

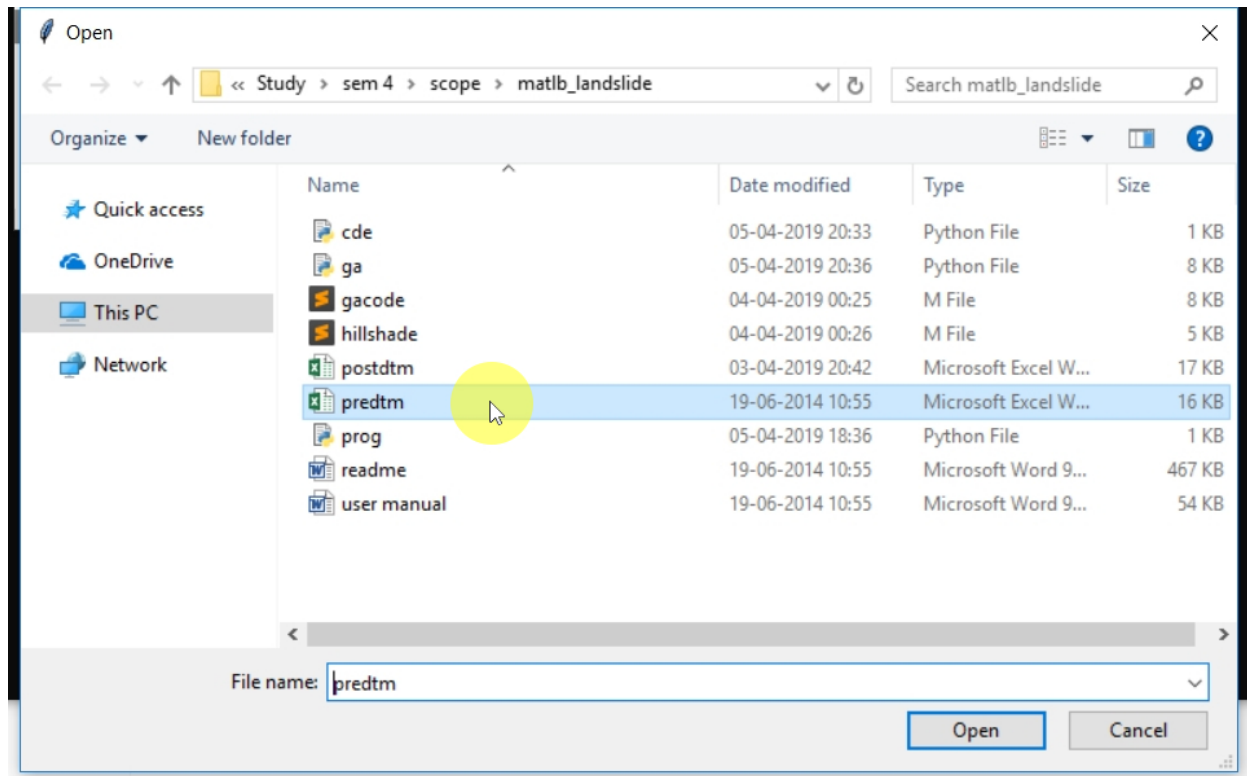
Selection of DTM taken after the landslide



Pre DTM

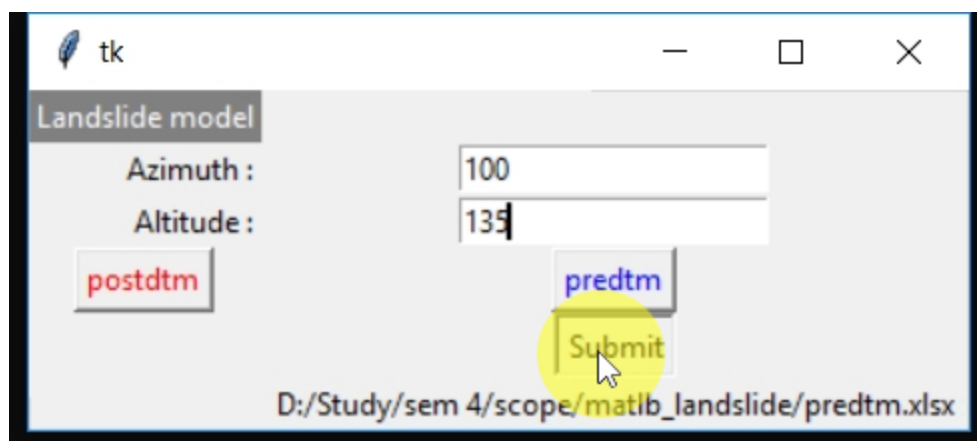
Selection of DTM taken some time before the landslide





Confirm details

Confirm the files and values and click submit to start calculation.

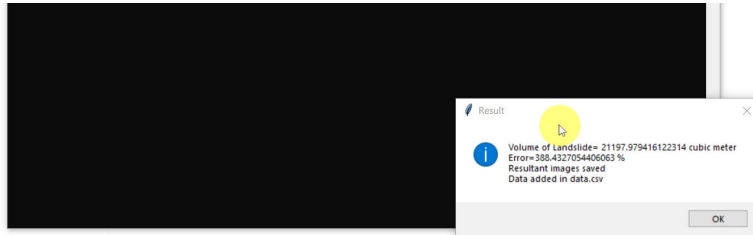


Result

Estimated volume of landslide along with error % in calculation.

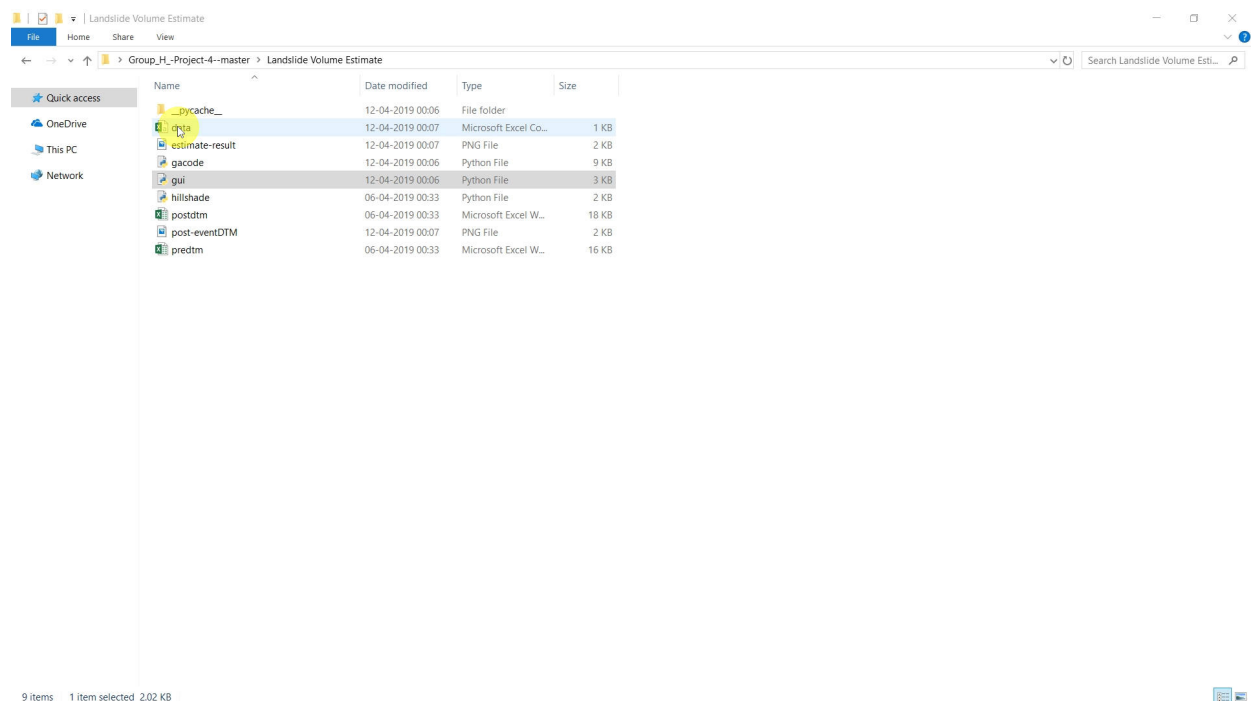
The location of result stored is data.csv

(The result here were calculated for very small number of iterations due to tutorial time constraint)



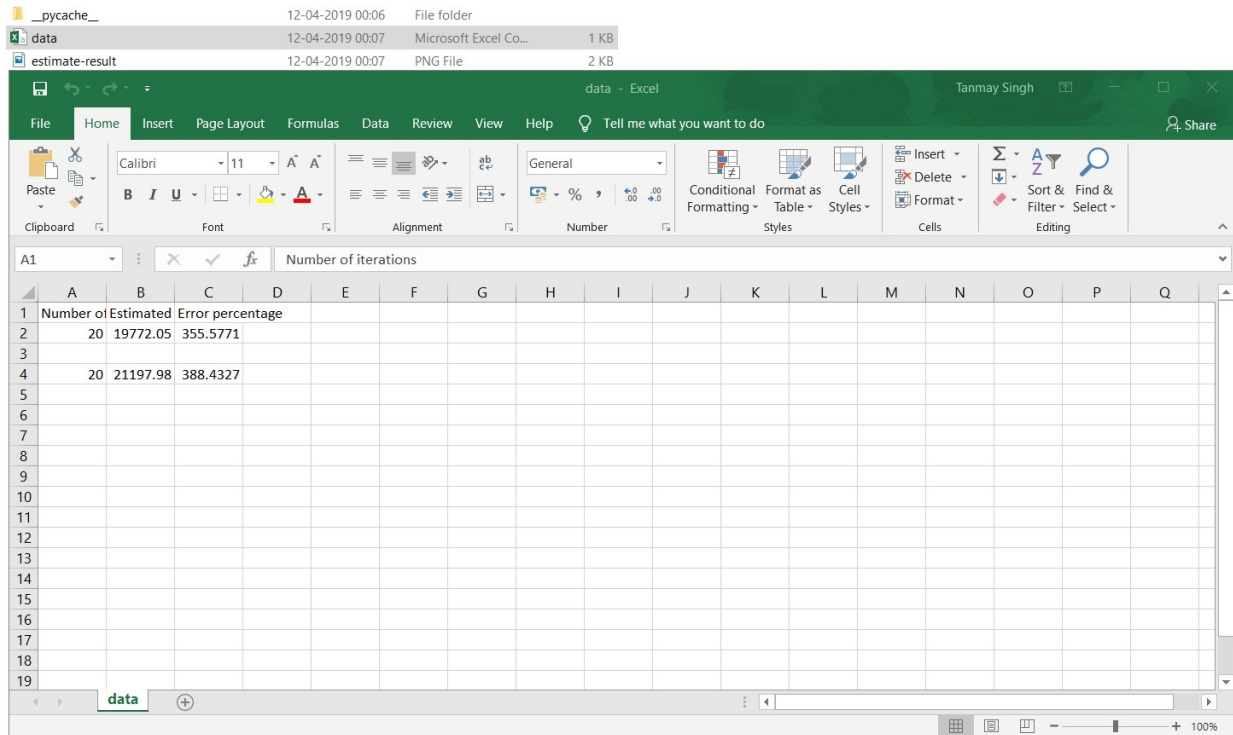
Results stored

The result of the calculation are stored in data.csv



Result

(The result here were calculated for very small number of iterations due to tutorial time constraint. The error can be reduced by increasing the number of iterations)



The screenshot shows a Microsoft Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Number of Estimated	Error percentage															
2	20	19772.05	355.5771														
3																	
4	20	21197.98	388.4327														
5																	
6																	
7																	
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19																	

Future scope

Landslide Volume Approximate (La.V.A) can be modified to provide more detailed analysis of a landslide.

This software can be upgraded to include geo-spatial distribution also, that will help to visualize the landslide situation at each point and time. This can be further analysed to give details about average and maximum speed of debris.