Pixel Selection, Pixel Visualization and top-k Pixel Recommender System

by

Edula Raashika

Outline

- Key advances in the latest version
- Pixel selection method
- Pixel visualization method
- Top-K Pixel Recommender System

Key advances in the latest version

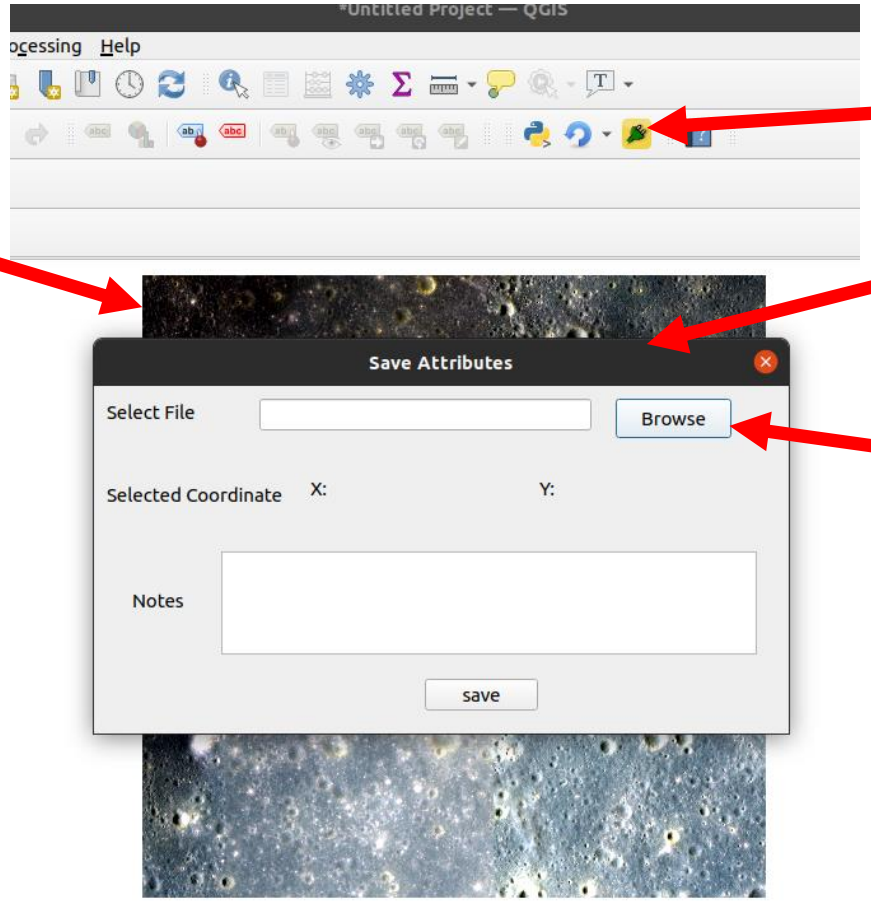
- Complete overhaul of the GUI
  - Prime focus was given for simplicity and ease of use
  - Functionalities were group and generalized
  - Visualization component was added for fine tuning the teaching data

- Addressed a major challenge
  - Coded a key QGIS library to read the band labels directly from the raster images
  - Our library can read band labels of any raster file format

Pixel selection method

- This method is used to select pixels that are of interest to the user

Step 1: load a raster file



Step 2: Click on our QGIS plugin

Step 3: Our GUI appears

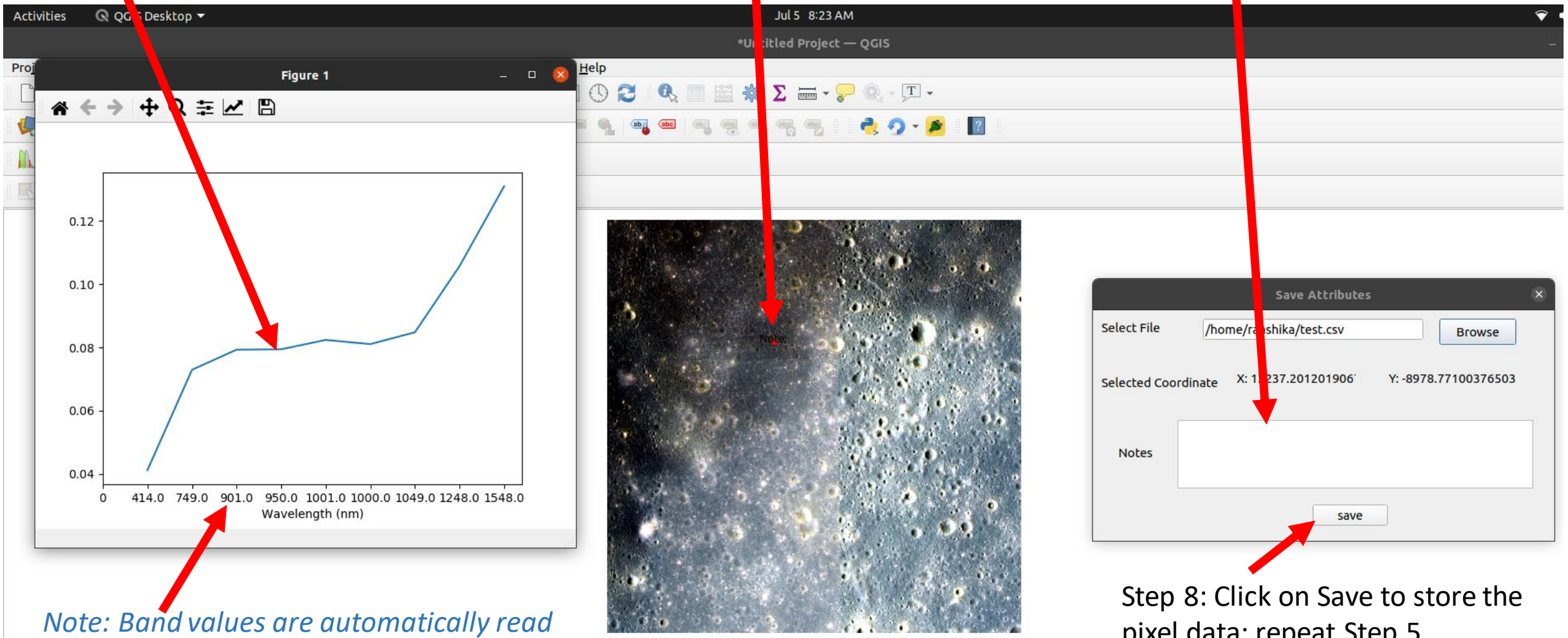
Step 4: Click on Browse button to save the pixel data

Pixel selection method

Step 6: band data of the pixel is shown

Step 5: Click on a pixel

Step 7: If you like the band data, write the note (not mandatory)



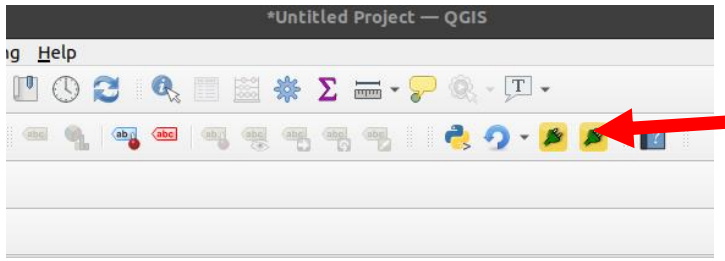
Note: Band values are automatically read

Step 8: Click on Save to store the pixel data; repeat Step 5

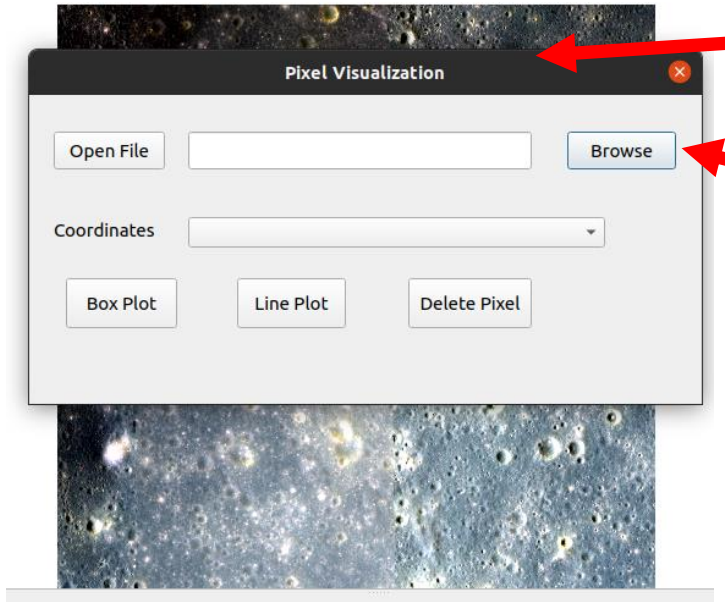
Demo

Pixel visualization method

- Objective: To refine the selected training data by removing the outliers



Step 1: Click on our QGIS plugin



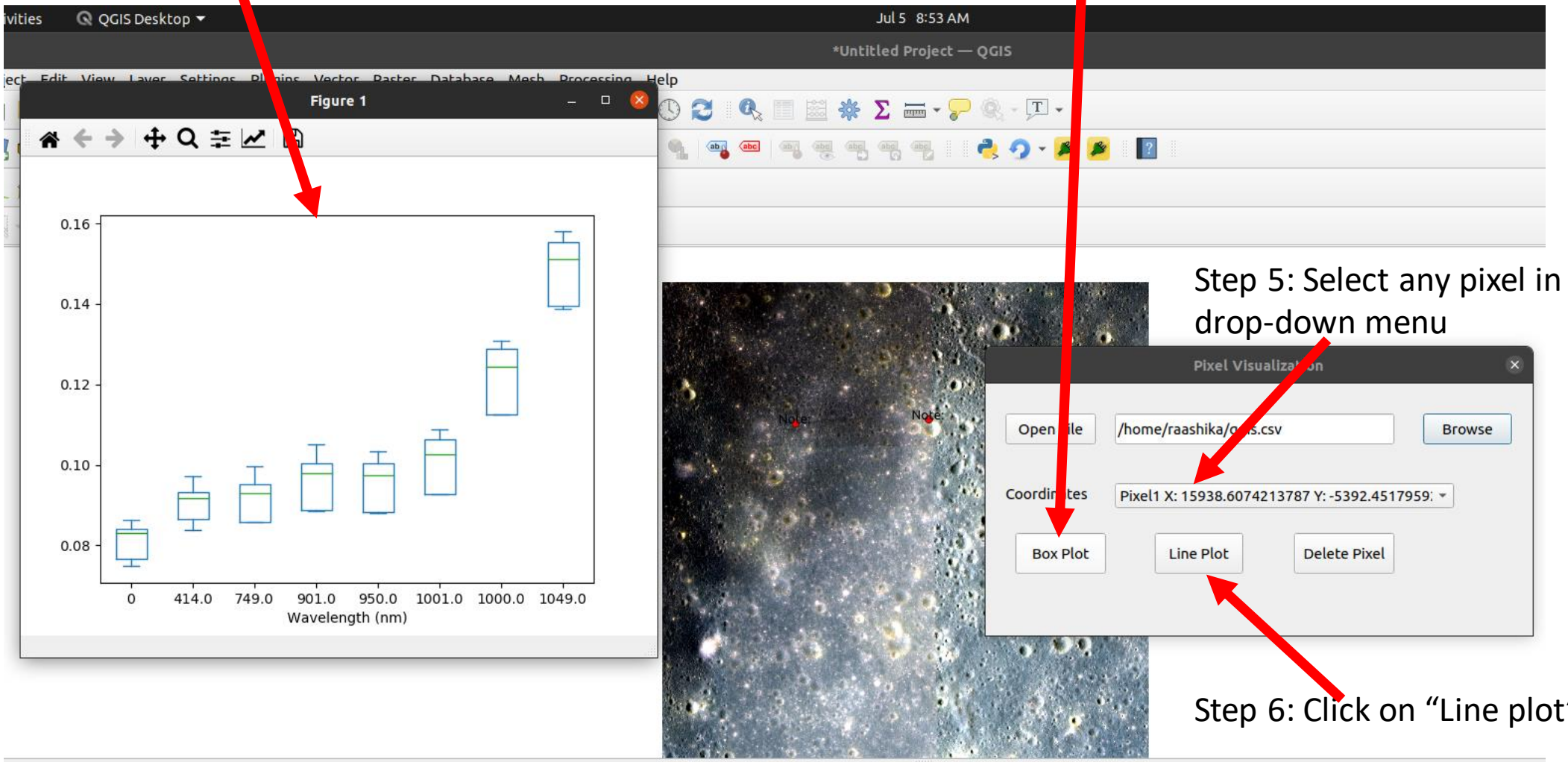
Step 2: Our GUI will appear

Step 3: Click on Browse button and select the file

Pixel visualization method

Step 5: Box plot will appear

Step 4: Click on “Box Plot” Button

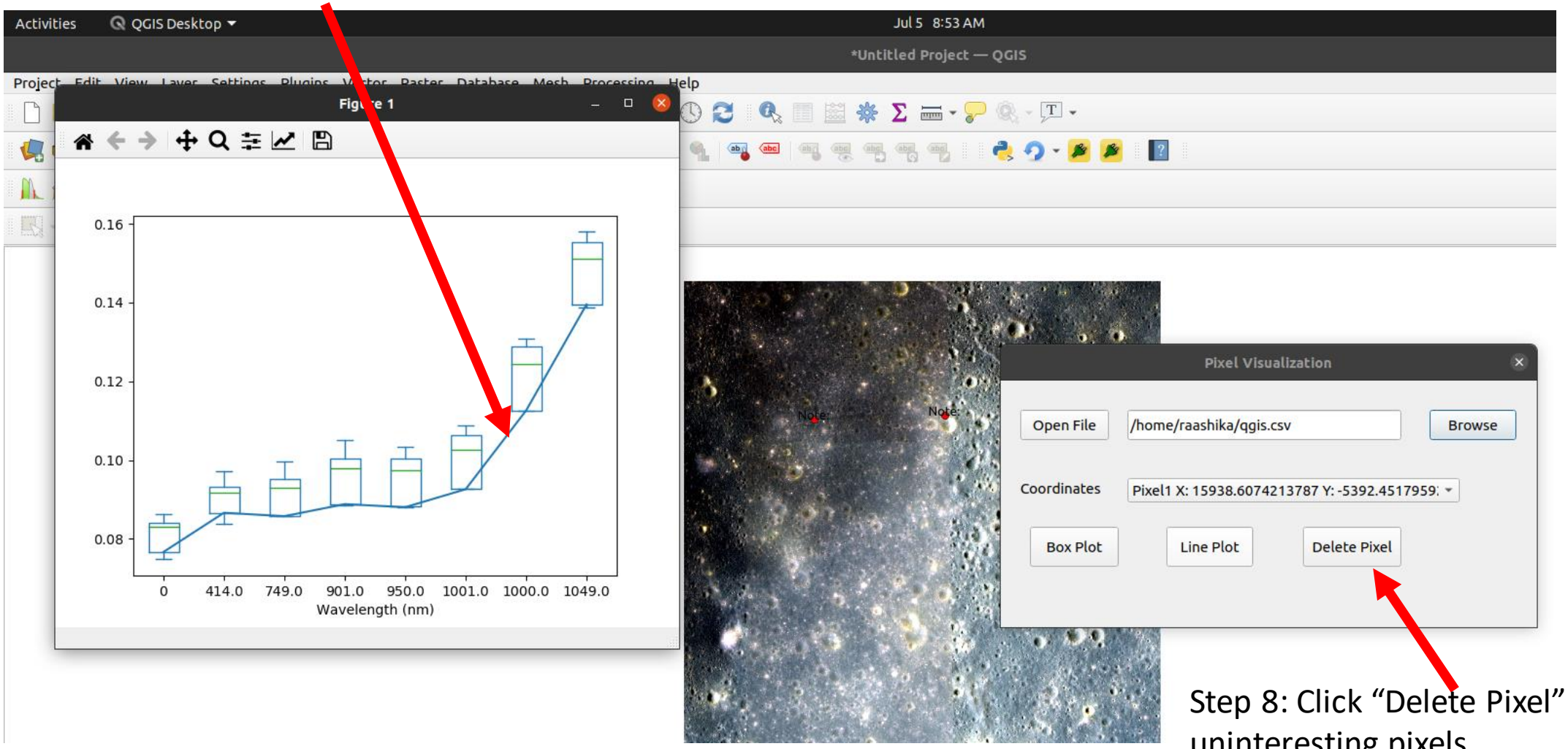


Step 5: Select any pixel in the drop-down menu

Step 6: Click on “Line plot”

Pixel visualization method

Step 7: The selected pixel data will appear



Step 8: Click “Delete Pixel” to remove uninteresting pixels

Demo

Top-K Pixel Recommender System

DEMO