Training a Classifier in Google Earth Engine Explorer

Load input data to Earth Engine.

1. Open earthengine.google.com
2. Click Explorer
3. Sign in (upper right hand corner) – You need to be a trusted tester to use certain features. If you have not yet been authorized, raise your hand! Eduardo can sign you up right now.
4. Click "Add Data"
5. Add Landsat TOA Percentile Composite.
6. Rename it 2000 and select the corresponding year for 2000
7. Add Landsat TOA Percentile Composite again
8. Rename it 2014 and select 2014, hit Apply and Save.

Now, we'll add a training dataset for our classification.

1. Select "Add Data"
2. Choose "Hand-drawn points and polygons"
3. Add 4 classes:
    a. Forest Loss
    b. Unchanged Forest
    c. Forest Gain
    d. Unchanged Non-forest
4. Use the editing tools to add points or polygons for each of the above classes.

Next, we'll train a classifier based upon the above training data we created.

1. Next to "Analysis:", select "Train a Classifier."
2. Select the default Fast Naïve Bayes at 30m resolution
3. Select "Train a classifier and display results."

The resulting map is a classification of Forest Loss, Unchanged Forest, Forest Gain and Unchanged Non-forest.

KEY: http://goo.gl/lv7wO1

Malaria Travel Risk example

Next, we'll figure out where the non-mosquito-affected areas are in Myanmar by selecting all areas over an elevation of 1000ft.

1. Navigate to Myanmar or use the Search field to get to Myanmar.
2. Add SRTM Digital Elevation Data 30m to your workspace.
3. Select "Add Computation"
4. Under "Per Pixel Math," choose "Threshold"
5. Settings:
    a. Image: STRM Digital Elevation 30m data
6. Select "Add Threshold"
7. Fill in 0 – 1000 → 0 for the first row of fields
8. Fill in 1000 - ___ → 1 for the second row of fields
9. Select "Apply" and Save.

Now, we'll mask out all areas under 1000ft.

1. Select “Add Computation” again.
2. Settings:
    a. Image: SRTM Digital Elevation Data 30m
    b. Mask: Raster
    c. Raster: Computed Layer: Threshold
3. Select Palette and choose a bright color for any data over 1000 ft elevation
4. Hit Apply and Save.

Now, turn off the “eye” icon next to your Computed Layer: Threshold and your SRTM data layer and voila! You have a map of areas in Myanmar that are mosquito-free.

KEY: http://goo.gl/WXxGqq