Christian John
#maptimeDavis Workshop Jan 12

Contextual maps lesson plan

Total time: 2 hours (1 hr 30 min planned + 30 min flexible time)

Learning objectives:

- Understand the relationship between satellite data and what we think satellites "see"
- Navigate "inverted" coding approach of JavaScript + Earth Engine
- Integrate Earth Engine + R in data pipeline

Outcomes:

- Generate a presentation-quality RGB image of a region of interest using Landsat 8 imagery accessed and processed through Earth Engine and plotted using R + ggplot().

Schedule:

- Introduction (10 minutes, CJ talking)
    - Who is Christian
    - Goals of workshop
    - Art & Science of remote sensing: *What is an RGB image?*
- Earth Engine Code explanation (30 minutes, CJ talking)
    - Provide students with code in advance
    - Walk-through with running demonstration in EE code editor
- ROI selection and do-it-yourself time (20 minutes, individual work)
    - Guide students to other relevant ROI's
    - Opportunity for folks to choose their own ROI and tinker with visualization parameters
- R coding (30 minutes, CJ live code)
    - Live code walkthrough of raster %>% fortify %>% ggplot %>% save
- Questions, discussion, independent practice, flex time (30 minutes, CJ + group + individual)