**Objectives**

- Map 20-year (2003-2023) averaged rate of change in LAI (leaf area index) and LST (land surface temperature).
- Create time series
- Find correlation between rate of change in LAI and LST.

**Methodology**

- Data from Google Earth Engine (MYD11A2.061 and MCD15A3H.061)
- Pixel by pixel linear regression method to find both rate of change in LAI and LST over 2003-2023 summer (Jun, Jul, Aug)
- Extract pixel values to graph LAI vs LST

**Results**

- Rate of change for LAI range: \(-0.1 \text{ – } 0.07\)
- Rate of change for LST range: \(-0.4 \text{ – } 0.7\)
- LAI and LST had most visible correlation in California
Time Series for California 2003-2023, June-August Monthly Mean

Rate of Change 2003-2023, June-August, 50km Resolution

LAI

JUN

JUL

AUG

LST

JUN

JUL

AUG

LAI

LST