Final Project
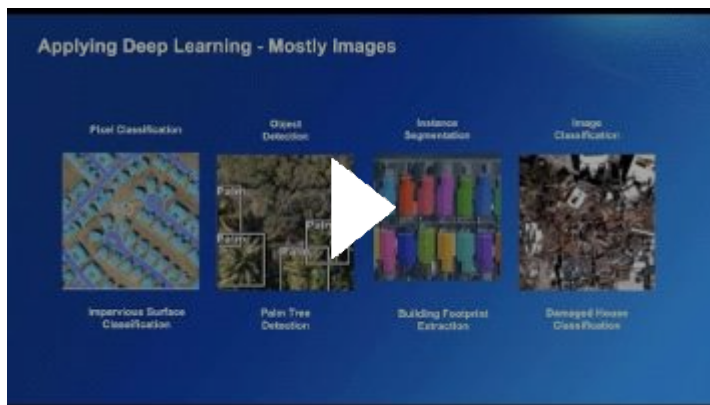
- CNN/VIT for Solar Panels
  1. Learns and identifies solar panels (this has been done before using CNN, so it should be easy to replicate)
  2. Detect damaged panels
  3. Estimate the energy output of those panels using information gotten like the size/features/position of panel relative to sunlight.
- Links:
  - [Machine and Deep Learning for Your Modern Energy Enterprise](#)

  - https://pro.arcgis.com/en/pro-app/latest/help/analysis/deep-learning/deep-learning-in-arcgis-pro.htm
  - https://pro.arcgis.com/en/pro-app/latest/tool-reference/image-analyst/detect-objects-using-deep-learning.htm
  - https://www.esri.com/en-us/industries/blog/articles/introducing-pretrained-deep-learning-models-for-energy/
    https://www.esri.com/arcgis-blog/products/arcgis/imagery/introducing-ready-to-use-deep-learning-models/
  - https://www.esri.com/arcgis-blog/products/arcgis/imagery/new-pretrained-models-available-may-2022/
  - https://supperundsupper.com/wp-content/uploads/2019/10/Detection-and-Mapping-of-Photovoltaic-Panels.pdf
  - https://www.arcgis.com/home/item.html?id=c2508d72f2614104bfcfd5ccf1429284/1000
  - https://storymaps.arcgis.com/stories/b9de83bf40644200a946ec5575efb56d
  - https://hub.arcgis.com/content/fcf62d84488f46ff93a5edc517f920ee/about
  - https://doc.arcgis.com/en/pretrained-models/latest/imagery/introduction-to-solar-panel-detection-usa.htm
  - https://doc.arcgis.com/en/pretrained-models/latest/imagery/using-solar-panel-detection-usa.htm
  - https://www.linkedin.com/pulse/detecting-solar-panels-basel-deep-learning-arcgis-jupyter-m%C3%BCller/
  - https://www.linkedin.com/pulse/detecting-solar-panels-basel-deep-learning-arcgis-jupyter-m%C3%BCller/
  - https://doc.arcgis.com/en/pretrained-models/latest/imagery/introduction-to-solar-photovoltaic-park-classification.htm
  - https://www.esri.com/en-us/industries/petroleum/segments/renewables
  - https://www.esri.com/about/newsroom/arcnews/deep-learning-model-unlocks-potential-of-solar-energy-development/

- https://www.esri.com/about/newsroom/publications/wherenext/nexttech-solar-assessments/
- https://www.esri.com/about/newsroom/publications/wherenext/utilities-business-model-change/
- https://www.esri.com/arcgis-blog/products/arcgis-geoplanner/design-planning/solar-suitability-modeling-with-arcgis-geoplanner/
- https://www.esri.com/about/newsroom/arcnews/the-power-of-location-analytics-in-the-solar-and-wind-energy-industry/
- https://www.arcgis.com/home/item.html?id=55600a3a452c4b208d3c54026c3f7cd1