



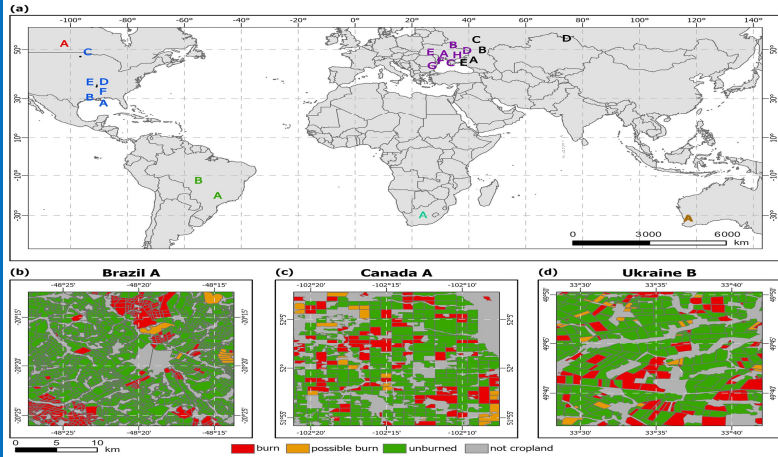
# Surveillance and Classifying of Crop Burning

Maria Robinson

College Park Scholars – Science & Global Change Program  
Department of Geology and Geographical Science Major  
mrobin37@terpmail.umd.edu  
CPSG230



College Park Scholars Academic Showcase, May 1, 2026

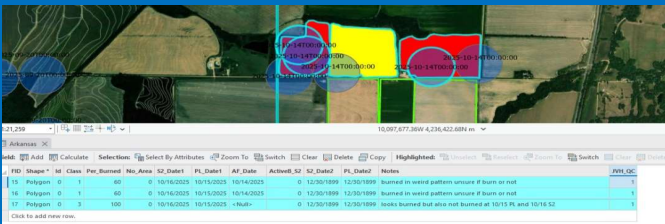
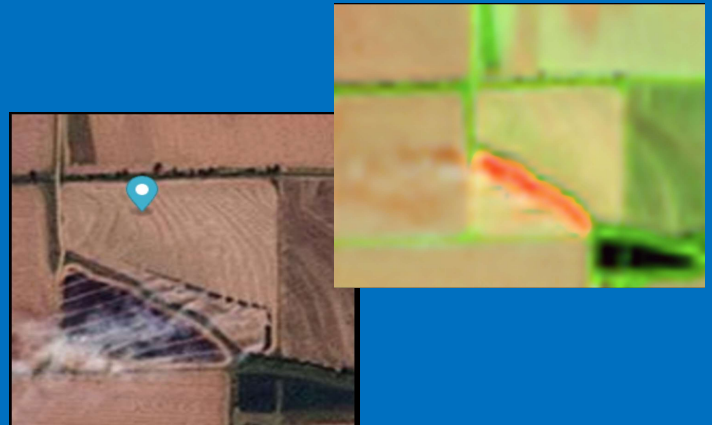


## Introduction:

- Crop burning has an intense effect on our global system that includes affecting air quality, biodiversity, and more. In the past, satellite-based burned area estimates have been used, although their results underestimate fire activity.
- Developed a method to more accurately predict the fire activity by mapping cropland areas and calibrating Visible Infrared Imaging Radiometer Suite (VIIRS) with that data.

## Activities:

- ArcGIS Pro: Used to map the fires and classify each field: red being an active fire, orange being a burned field, yellow being unknown, green being unburned, and grey not being a field.
- Planet Explorer: Surveillance with real color images
- Copernicus Browser (Sentinel-2): Surveillance with hyper saturated color



## Personal Statement :

I had so much fun during this internship. I'm a big fan of technology and learning new programs and their application. Although I did struggle in the beginning and it was frustrating, my supervisor was supportive and understanding. So, I got to practice my skills and learn a lot more about what goes on during a study. Overall, this was a very nice experience that I hope to do more of in the future.

## Site Information:

Name of Site: OACS Lefrak Computer Lab  
Address: 7251 Preinkert Dr, College Park, MD 20742  
Your supervisor: Joanne Hall

The site mission: We work to provide accurate data to further push environmental discovers and policy. Identify crop fires and/or burned land, digitize observations, send digitized Mapped data.

## Impact:

This really improved my discipline and self-management skills since I didn't have someone really supervising me unless I was struggling and needed help. So, I needed to be on top of the work I was doing so that my part would be done and it wouldn't interfere with my other work. This is also training me in using different programs and tools so that I can use them efficiently on my own. Overall, it's sharpening my technical skills with the different tools I've been using and my regulation of my work and self.

## Acknowledgments:

I want to thank Drs. Holtz & Merck as well as my supervisor Joanne Hall for Helping with this project every step of the way

