Michael Adegbenro

Curriculum Vitae

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University of Maryland, College Park
Department of Geographical Sciences
College Park, MD 20740

EDUCATION

B.S., Geographical Information Science — December 2020
University of Maryland — College Park, MD

M.S., Geospatial Information Sciences — November 2023
University of Maryland — College Park, MD

RESEARCH PROJECT

M.S., Capstone "Assessing Forest Cover Dynamics in Ukraine from 2000 to 2015 Using Elevation Change"

- Corrected the 30m global resolution SRTM model for noise and subpixel offsets to enabled comparison with the 30m Copernicus digital elevation model to calculate change in elevation.
- Characterized and map relationship of forest loss and elevation change and produced estimated area of change using stratified random sampling.

APPOINTMENTS

Faculty Specialist, Department of Geographical Sciences — February 2020 – Present
University of Maryland — College Park, MD

SUMMARY

- Point of Contact (POC) for large area urban land use change labeling project of major Ukrainian cities between 2016 and 2021.
- Leading role in data processing, labeling, and analysis for NASA Land Cover Land Use Change and Cloud Masking Inter-Comparison Exercise (CMIX) projects.
- Code maintenance on Python workflow for automation of Sentinel-2 data processing used in generating cloud-free image composites.
- Validation practices for satellite-based Earth observation data and machine learning model; Contributions to papers, conference presentations, and reports.

OTHER EXPERIENCE

Remote Sensing Analyst — July 2020 – December 2020
Department of Geographical Sciences — College Park, MD

Campus GIS Technician — January 2020 - May 2020
University of Maryland Facilities Management — College Park, MD

Project Engineer Intern — June 2019 – August 2019
MCN Build — Washington, DC

PUBLICATIONS

Zhang, Y., Skakun, S., **Adegbenro, M.**, and Qing Ying. (2022). Leveraging the Use of Labeled Benchmark Datasets for Urban Area Change Mapping and Area Estimation: A Case Study of the Washington DC–Baltimore Region. International Journal of Digital Earth 15 (1): 1169–86. https://doi.org/10.1080/17538947.2022.2094001.

Skakun, S., Abys, C., **Adegbenro, M.**, Becker-Reshef, I., Duncan, E., Eun, J., Hall,J., et al. (2022). High-Impact Hot Spots of Land Cover Land Use Change in Ukraine. In 2022 12th International Conference on Dependable Systems, Services and Technologies (DESSERT), 1–5. Athens, Greece: IEEE. https://doi.org/10.1109/DESSERT58054.2022.10018657.

NON-REFEREED PUBLICATIONS

Hall, Joanne V., Fernanda Argueta, and Louis Giglio. (2021). Validation of MCD64A1 and FireCCI51 Cropland Burned Area Mapping in Ukraine. International Journal of Applied Earth Observation and Geoinformation 102 (October): 102443. https://doi.org/10.1016/j.jag.2021.102443.

PROJECTS AND GRANTS

Co-I or Collaborator:

2021–2023	Co-I for NASA project "High-Impact Hot Spots of Land Cover Land Use Change: Ukraine and Neighboring Countries" (NASA; Funded)
2023	Other Professional for the "Detecting and Mapping War-induced Damage to Agricultural Fields in Ukraine Using Multi-modal Remote Sensing data" (NASA; Funded)
2023	Co-I for the "Satellite VHR Imagery for Mapping Temporary Roofs and Its Duration Following Natural Disasters" (NASA; Not-Funded)
2022	Co-I for the "War-Induced Infrastructure/Building Damage Assessment and Mapping in Ukraine using Capella SAR Imagery" (NASA; Not-Funded)
2021–2022	IARPA/NGA project "WATCH: Wide Area Terrestrial Change Hypercube" (IARPA/NGA; Funded)

AWARDS, HONORS & FELLOWSHIPS

2022 Outstanding Undergraduate Teaching Assistant Award

CERTIFICATIONS (COURSES & TRAINING)

- "Google Earth Engine Applications for Land Monitoring." by NASA Applied Remote Sensing (ARSET), June 2021 (Online)
- "InSAR Processing and Time-Series Analysis For Geophysical Applications: ISCE, Aria-Tools, and MintPy" by NASA JPL & UNAVCO, August 2021 (Online)
- "The PolInSAR Course: An Experimental SAR Training Couse" by German Aerospace Center's Pol-InSAR Team, September 2021 (Online)

COMMUNITY & OTHER SERVICE

2021/Aug-Dec	TA for **GEOG371 "Programming for Image Analysis**" course (Fall semester)
2022	Department of Geographical Sciences HS Inaugural Recognition Banquet Speaker
2022/Aug-Dec	TA for **GEOG371 "Programming for Image Analysis"** course (Fall semester)
2023	Speaker at mentoring and professional development panel at Old Dominion University

PARTICIPATION AT CONFERENCES, WORKSHOPS, SEMINARS

Presenting Author

- **Adegbenro, M**. & Skakun, S. (2022). Evaluation of SRTM and Copernicus DEM Differencing with Land Cover Classification. AGU Fall Meeting 2022, Chicago, Illinois 10-16 December 2022. (Poster)
- **Adegbenro, M**. & Skakun, S. (2023). Assessing Forest Cover Dynamics in Ukraine from 2000 to 2015 Using Elevation Change. AGU Fall Meeting 2023, San Francisco, California 11-15 December 2023. (Poster)

Workshops

- NASA Carbon Cycle & Ecosystems (CCE) Joint Science Workshop & Science Team Meetings. 2023 Meeting. College Park, MD, 8-12 May 2023. (Attendee)
- The Fourth Spatial Data Science Symposium (SDSS2023). 5-6 September 2023. (Attendee)
- CEOS Cloud Masking Inter-comparison Exercise (CMIX-II) Workshop on the Collaborative Dataset (IRIS tool). 4 October 2023. (Attendee)