Optional Resources

This article by the BBC is about the practice of cyber-archaeology and crowdsourcing images for creating photogrammetry reconstructions of cultural artifacts that have been destroyed. The story includes the origins of Project Mosul, now known as Rekrei, and the effort to photogrammetrically reconstruct artifacts destroyed by ISIS.
“Cyber-archaeology' salvages lost Iraqi art”, by Jonathan Webb, BBC
https://www.bbc.com/news/science-environment-32742622

In his TEDxHamburg presentation, Project Mosul (now Rekrei) co-founder Chance Coughenour talks about crowdsourced photogrammetry for reconstructing lost cultural artifacts.
“**How to Crowdsource the Reconstruction of Lost Heritage”, by Chance Coughenour, TEDxHamburg**
https://youtu.be/fCQpMgb7GMo

“Zanzibar Mapping Initiative” by the Tanzania Commission for Science and Technology (COSTECH) and the Revolutionary Government of Zanzibar
http://www.zanzibarmapping.org/

LiDAR Data Viewers:
“plas.io”
https://plas.io/

“Potree”
http://potree.org/potree/examples/viewer.html

“Intro to PointCloudLayer“, by ArcGIS Developers, Esri
https://developers.arcgis.com/javascript/latest/sample-code/layers-pointcloud-portal/

International Datasets:
Note: OpenTopography has both LiDAR datasets and photogrammetrically produced orthophotos and 3D elevation model datasets.
“Find Topography Data“, OpenTopography
https://portal.opentopography.org/datasets

Note: OpenAerialMap has an international dataset of open source orthophoto maps from satellites and drones.

“OpenAerialMap”
https://map.openaerialmap.org

Note: The Humanitarian Data Exchange database includes orthophoto maps, for example:**“IOM Bangladesh - Needs and Population Monitoring (NPM) Cox's Bazar Rohingya Refugees Settlements UAV Imagery“, Humanitarian Data Exchange**

https://data.humdata.org/dataset/iom-npm-cox-bazar-uav-imagery

Note: Theia LiDAR datasets include:

- France
- Africa : Cameroon, Congo, Ivory Coast, Gabon, Ghana, Equatorial Guinea, Liberia, Madagascar, Republic of Congo, Africa Central Republic, Surinam
- South America : Guyana, French Guyana, Argentina, Chili
- Asia : Iran

“Theia”
https://www.theia-land.fr/en/product/lidar/

United States LiDAR Data Sets:
“National Center for Airborne Laser Mapping Data Distribution Center”, University of California Berkeley
https://calm.geo.berkeley.edu/ncalm/ddc.html

“Office for Coastal Management: Digital Coast”, National Oceanic and Atmospheric Administration
https://coast.noaa.gov/digitalcoast/

“National Ecological Observatory Network (NEON)”, by National Science Foundation
https://data.neonscience.org/data-products/explore

“EarthExplorer”, United States Geological Survey
https://earthexplorer.usgs.gov/

“3DEP LidarExplorer”, United States Geological Survey

https://prd-tnm.s3.amazonaws.com/LidarExplorer/index.html#/

Spanish LiDAR Data Sets:
“Centro de Descargas”, Gobierno de España
https://centrodedescargas.cnig.es/CentroDescargas/buscadorCatalogo.do?codFamilia=LIDAR

Russo-Ukrainian War Links:
“UkraineWarDroneIncidents2022”, by Faine Greenwood
https://docs.google.com/spreadsheets/d/1NtgseODXGSAomx6G5Efwz4XY6AuYF9ZjGSGiCxvNHXE/edit?usp=sharing

“Destructed Buildings in Mariupol Ukraine“, by LibanCiel
https://sketchfab.com/3d-models/destructed-buildings-in-mariupol-ukraine-69a49248518c4a8ea9e56629c330e0ee

“Map Kiev (Ukraine)“, by burunduk
https://sketchfab.com/3d-models/map-kiev-ukraine-d755fd9ae28743f39c4ddfb9944bee33

“Destroyed An-225 "Mriya" in Gostomel// 4K”, Ukrainska Pravda
https://www.youtube.com/watch?v=ysa5pTtwO3Q

This 3D model was made from the “Destroyed An-225 "Mriya" in Gostomel// 4K” video”, published by Ukrainska Pravda.
“An-225 Mriya destroyed (as of April 2022)”, by Simeon Schmauß
https://sketchfab.com/3d-models/an-225-mriya-destroyed-as-of-april-2022-86ccda4a931643c095506928755f6d53

“Ukrainian Drone Buzzes Low Over Proxy Trenches, Records Russian Mine Launchers“, by FUNKER530
https://www.youtube.com/watch?v=XY6YjcUB_3I