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Teaching GIS with GeoAI

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Education Manager, Geographer

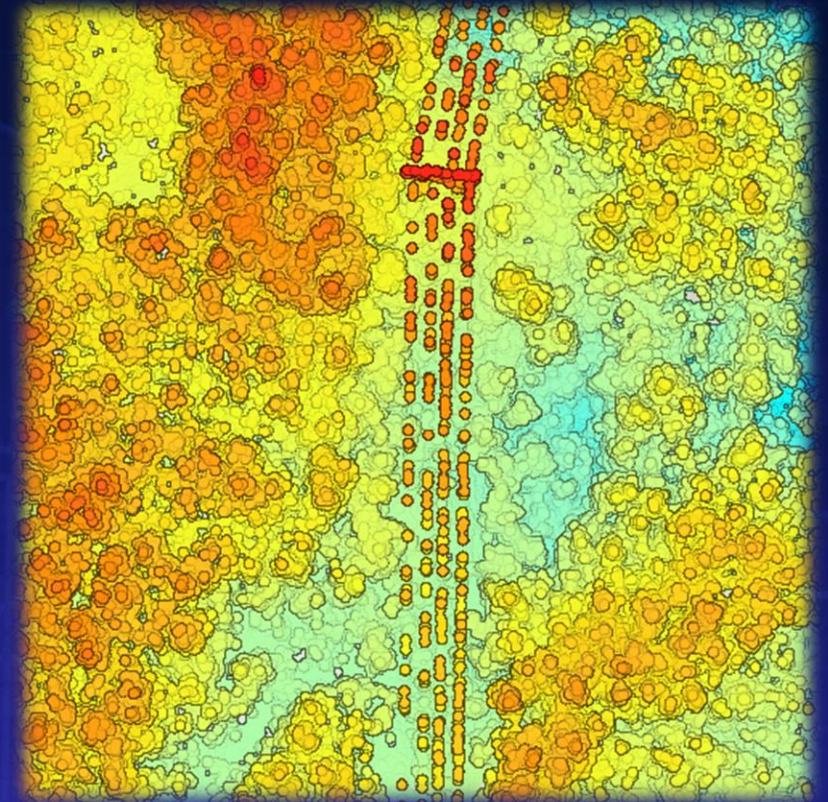
Additional Lessons to try

Identify infrastructure at risk from landslides:

<https://learn.arcgis.com/en/projects/identify-infrastructure-at-risk-of-landslides/arcgis-pro/>

Classify powerlines using deep learning:

<https://learn.arcgis.com/en/projects/classify-powerlines-from-lidar-point-clouds/>



Resources for continuing your learning pathway



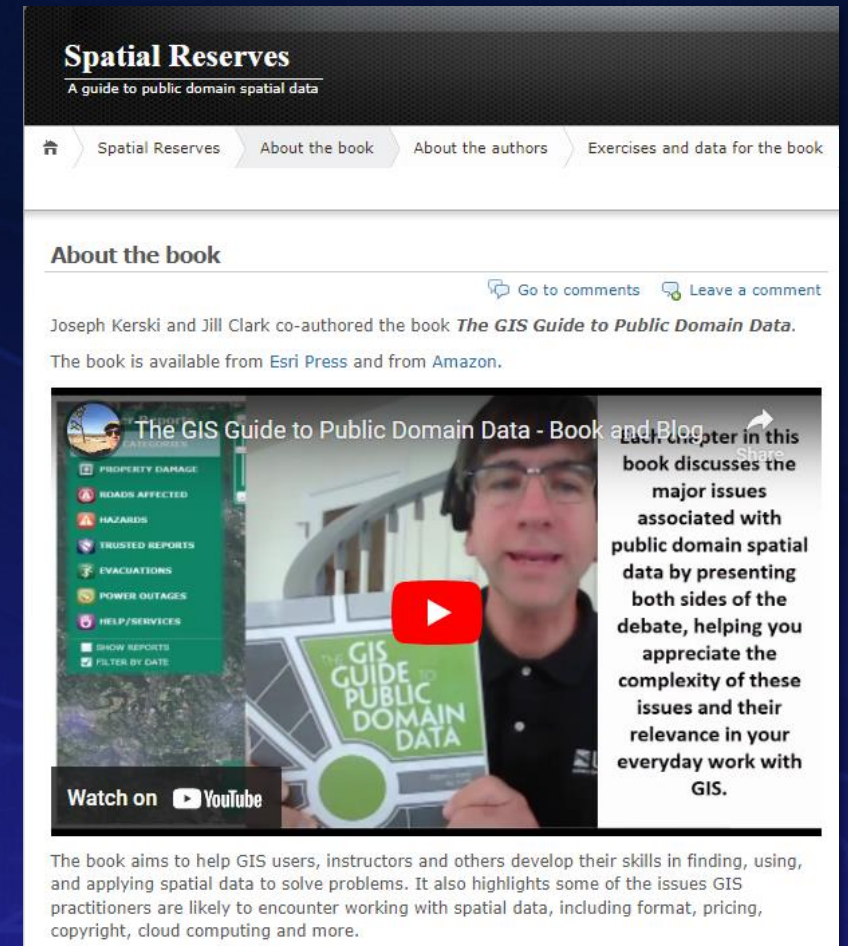
Reflections and Context

- AI presents us amazing capabilities and has already transformed decision-making and the makeup of much day-to-day GIS work.
- We don't get to go backwards in technology: AI tools are here to stay.
- Use AI tools wisely: Understand what is in the models and algorithms
- Joseph's video reflections on these important topics:
 - https://youtu.be/rnofTJEGw_0?si=FBKhIEWc9zjEidmW



The Spatial Reserves data book and blog

- <https://spatialreserves.wordpress.com>: Where can I find geospatial data, how do I know if it is any good, and societal implications: Copyright, location privacy, ethics.
- An AI powered open data portal:
- <https://spatialreserves.wordpress.com/2024/05/13/ai-powered-open-data-portal-for-washington-dc/>
-
- Why AI needs to be digitally resilient:
- <https://spatialreserves.wordpress.com/2024/04/15/reflections-on-why-ai-needs-to-be-digitally-resilient/>



Spatial Reserves
A guide to public domain spatial data

Home Spatial Reserves About the book About the authors Exercises and data for the book

About the book

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Joseph Kerski and Jill Clark co-authored the book *The GIS Guide to Public Domain Data*. The book is available from Esri Press and from Amazon.

The GIS Guide to Public Domain Data - Book and Blog

Each chapter in this book discusses the major issues associated with public domain spatial data by presenting both sides of the debate, helping you appreciate the complexity of these issues and their relevance in your everyday work with GIS.

Watch on YouTube

The book aims to help GIS users, instructors and others develop their skills in finding, using, and applying spatial data to solve problems. It also highlights some of the issues GIS practitioners are likely to encounter working with spatial data, including format, pricing, copyright, cloud computing and more.

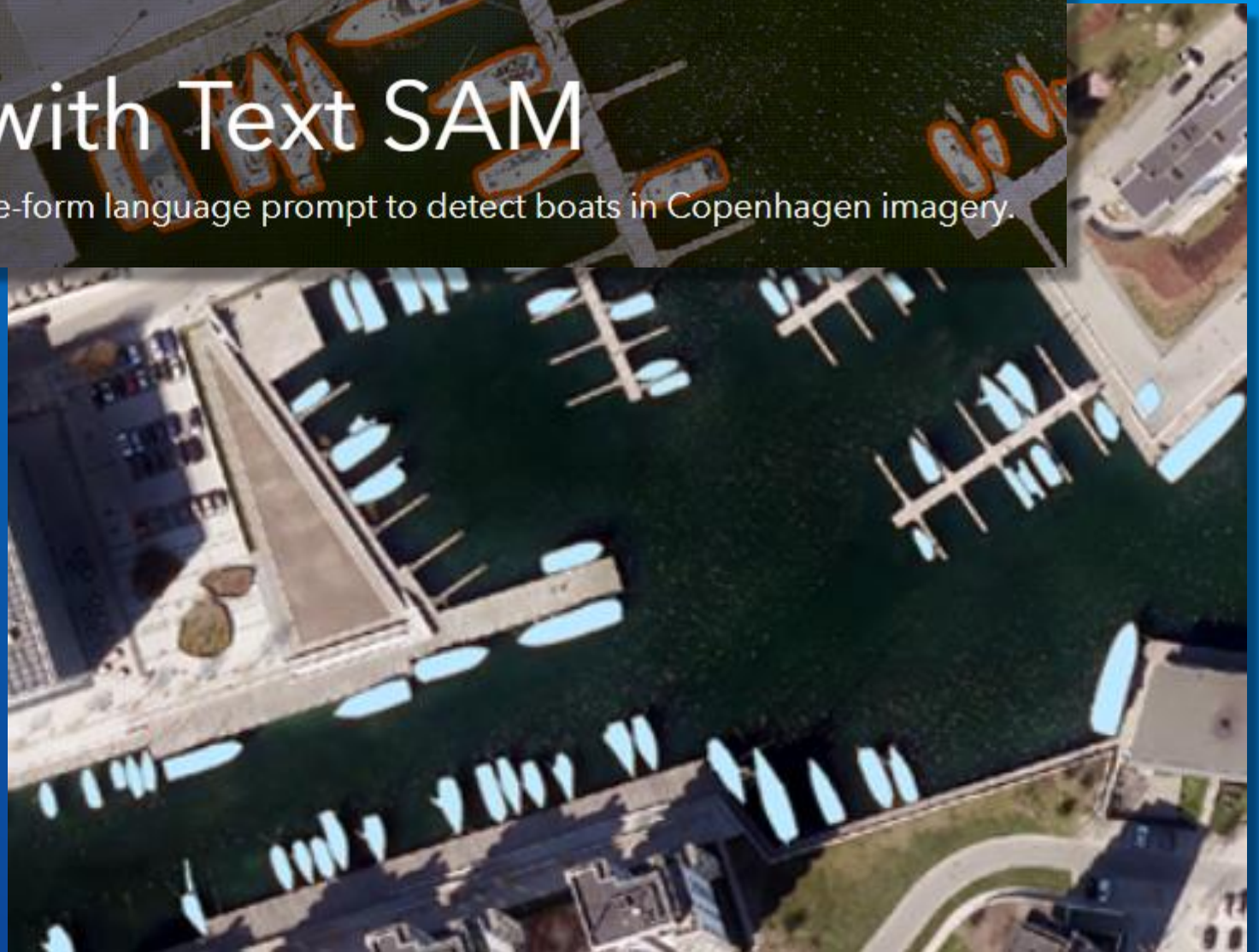
ArcGIS GeoAI Resources

- AI & Location Intelligence
 - <https://www.esri.com/en-us/artificial-intelligence/overview>
- GeoAI
 - <https://www.esri.com/en-us/capabilities/geoai/overview>
- ArcGIS Pretrained Models
 - <https://doc.arcgis.com/en/pretrained-models/latest/get-started/intro.htm>
- ArcGIS Pro GeoAI Toolbox
 - <https://pro.arcgis.com/en/pro-app/latest/tool-reference/geoai/an-overview-of-the-geoai-toolbox.htm>
- Esri Training
 - <https://www.esri.com/training/>
- Tutorials
 - <https://learn.arcgis.com/en/gallery/>

Detect objects with Text SAM

Use a multi-purpose GeoAI model with a free-form language prompt to detect boats in Copenhagen imagery.

<https://learn.arcgis.com/en/projects/detect-objects-with-text-sam/>



Keep Learning

- 2024 Esri Education Summit and International User Conference
 - San Diego, CA www.esri.com/uc 15-19 July | www.esri.com/educ 13-14 July

Unlocking the power of Geospatial AI:

- <https://community.esri.com/t5/education-blog/resources-for-unlocking-the-power-of-geospatial-ai/ba-p/1293098>
-
- Learn ArcGIS Lesson Library: <https://learn.arcgis.com>
- Example:
 - <https://www.esri.com/training/catalog/6410c0524d750615175c0b58/classifying-objects-using-deep-learning-in-arcgis-pro/> Classifying objects using Deep Learning in ArcGIS Pro.
- Esri MOOCs: <https://www.esri.com/training/mooc/>
- University of Denver Digital Earth MOOC: EdX: <https://www.edx.org/learn/gis-geographic-information-systems/university-of-denver-dux-university-college-digital-earth>

