



Machine Learning for Geospatial Vector Data

Workshop #1 Please visit bit.ly/geoml-1

Presented by Jaydeep Mistry & Juan Carrillo

On behalf of the Geospatial Club - Winter 2019
In partnership with the Geospatial Centre



Agenda

1. Introductions
2. Why should we care about Machine Learning?
3. Setup of the cloud-computing platform
4. Perform Data Exploration
5. Apply Machine Learning
6. Wrap-up

Machine Learning in Agriculture

5 USE CASES OF AI + ROBOTICS IN AGRICULTURE

ANALYZING SATELLITE IMAGES



IN-FIELD MONITORING



ASSESSING CROP/SOIL HEALTH



PREDICTIVE ANALYTICS



AGRICULTURAL ROBOTS



Why apply Machine Learning for Geospatial Data?

Additional sources:

[AI and Machine Learning with ArcGIS](#)

[UWaterloo WatMos Lab](#)





How to perform Machine Learning online?

kaggle

- Free-to-use platform
- Designed for Data Science Competitions
- Full integration with **Python** and **R** for Cloud Computing

Optional: [Google Colab](#), [Earth Engine](#)



Let's get started!

Dataset



<http://www.visionzerotochallenge.ca/>

Notebook (aka Kernel)





Data Cleaning

For the people who requested to see what the Data Cleaning process was for the dataset used in this workshop:

- Original [Dataset](#)
- Data Cleaning [Notebook](#)



Wrap-Up

Thank You to the Geospatial Centre
for this collaboration!

Please upvote Kernel and dataset.

Next workshop on Feb 13th!
Same room, but meet at 2pm.

[Machine Learning for Geospatial
Data Workshop #2 - Raster Data](#)

[Apply](#) and vote for Exec positions GeoClub (undergrads)

Contact us at:

<https://www.facebook.com/uwgeospatial/>

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