Practice #1 Image Classifier





> #1 Image Classifier Assignment

INSTRUCTIONS:

Record a video with 10-15 minutes explaining how to use Image Classifier and your discoveries.

- In the Image Classifier select <u>3 or more</u> different categories of images
- Tag each image
- Train your model
- Validate the results
- Evaluate the results
- Analyze all the steps you performed and think how should be the behavior (processes) of an enterprise solution with the same purpose. What are the differences?

In your video explain how and why you performed each step and explain the final result.

EVALUATION:

Mark: 5 points

- Ensure that you recorded yourself using the tool
- Ensure that you showed all the performed steps
- Ensure that you analyse the results
- Explain what kind of ML you are using in this exercise and why

Will be considered: Your results, explanations, level of details, clarity to explain and presentation / video quality (preparation).

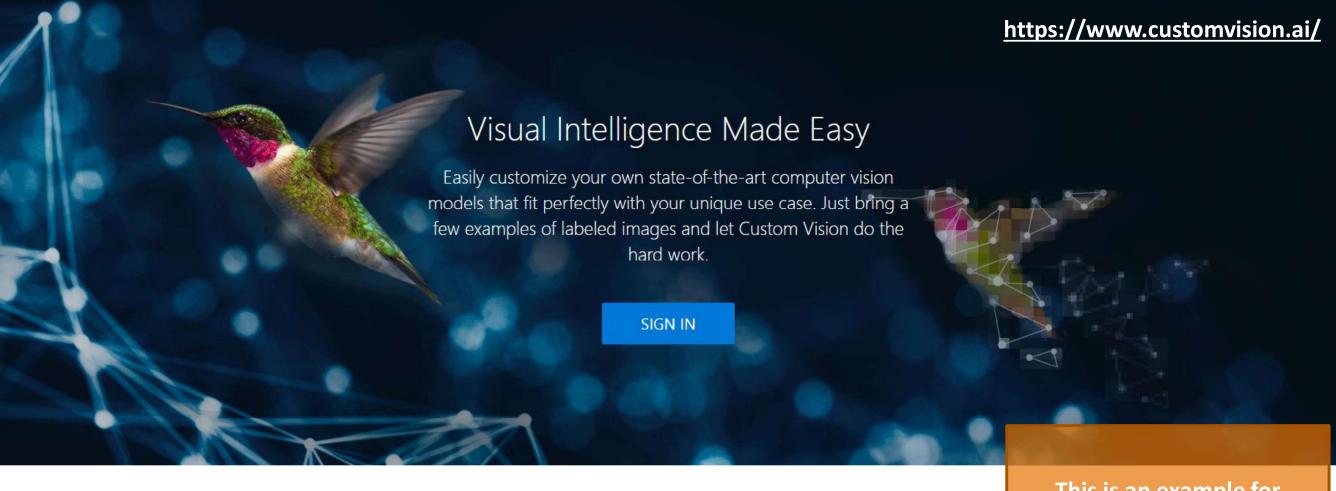
Due date: Week 3 class



Microsoft

Cognitive Services

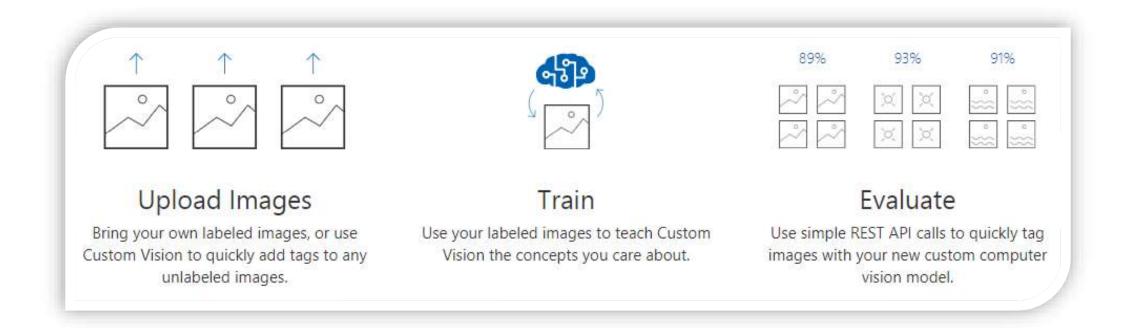
Custom Vision





This is an example for academic purposes

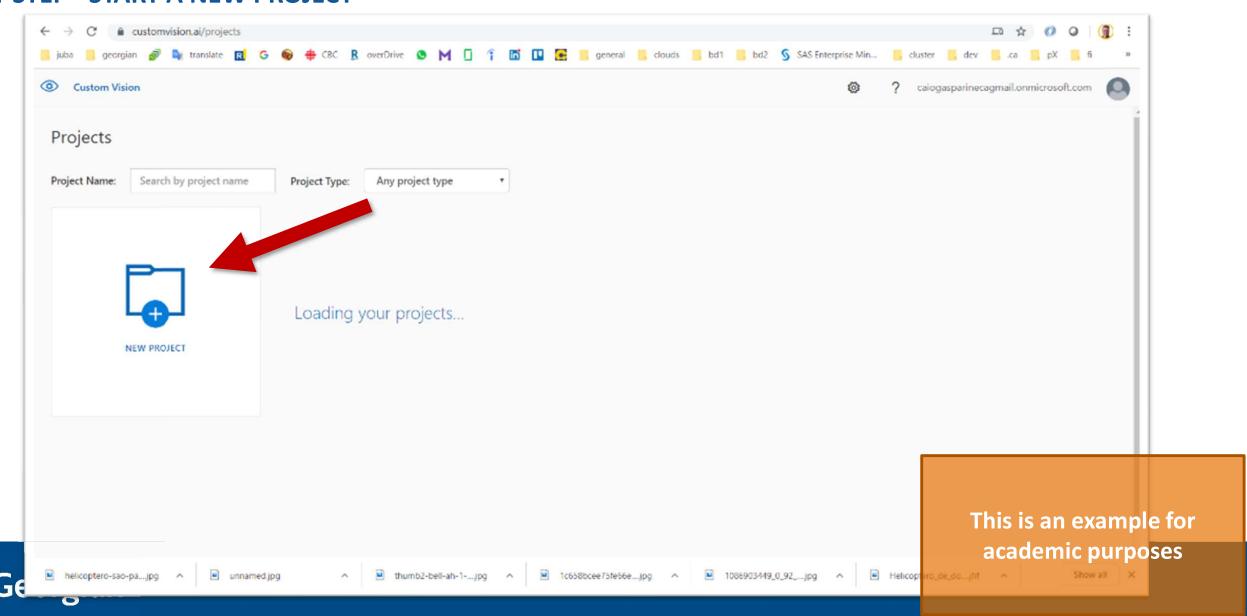
HOW IT WORKS?



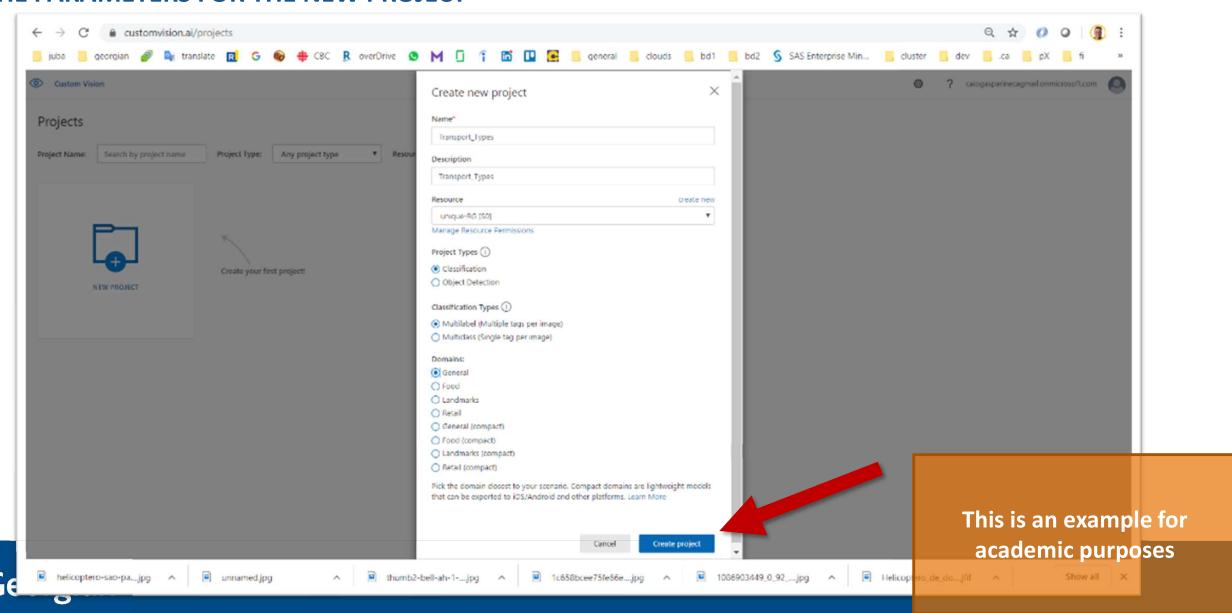
This is an example for academic purposes



FIRST STEP - START A NEW PROJECT



SET THE PARAMETERS FOR THE NEW PROJECT



SELECT THE IMAGES TO TRAIN YOUR MODEL





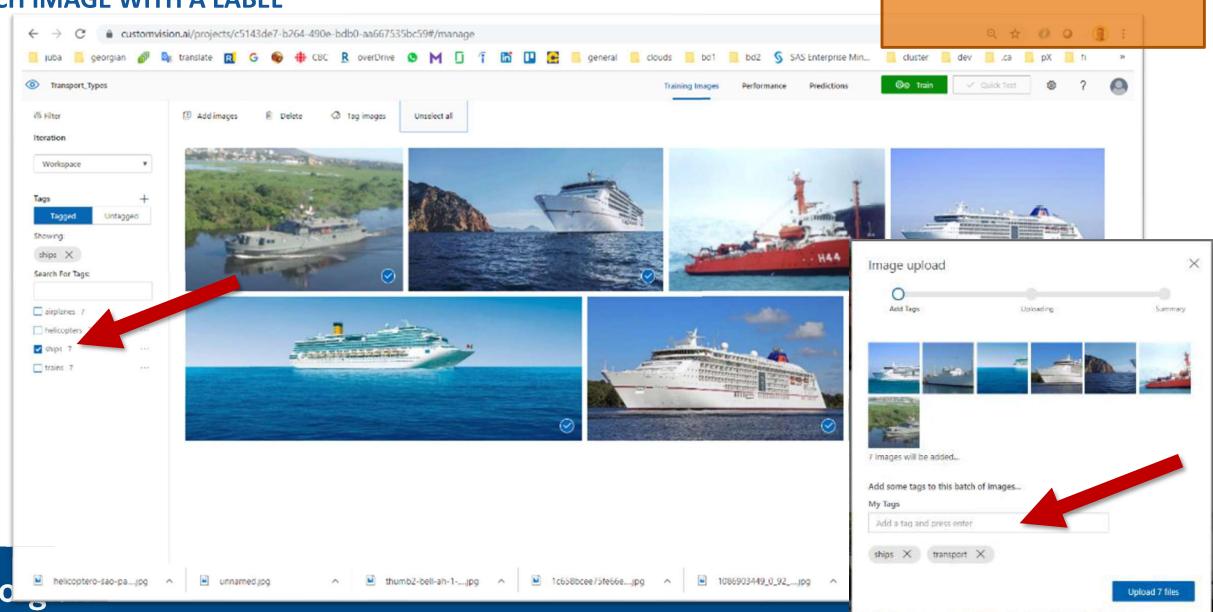




This is an example for academic purposes



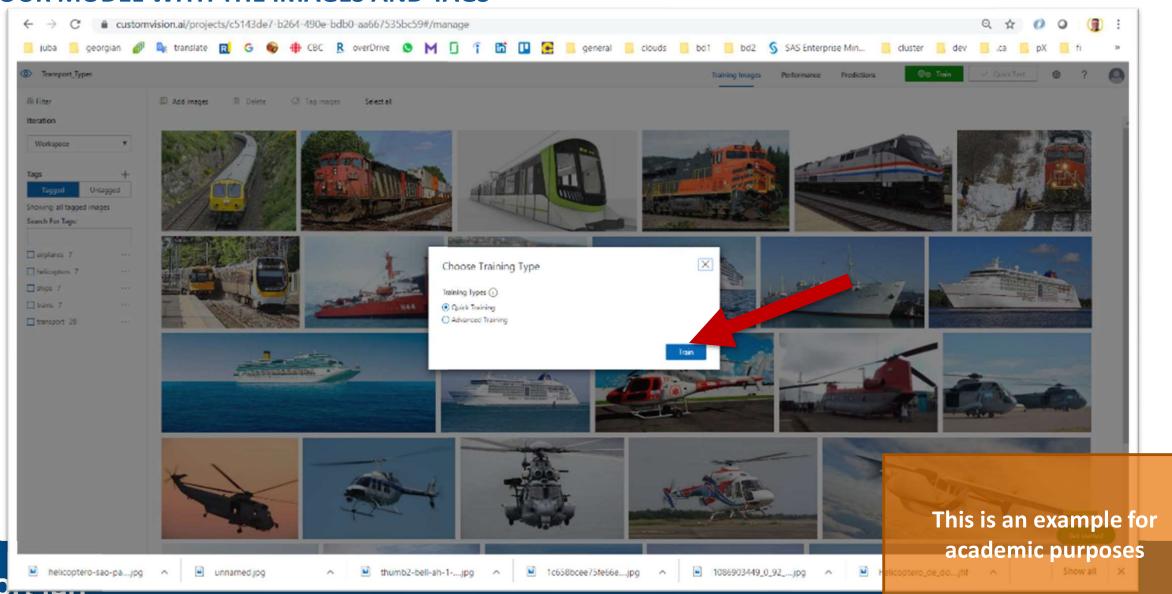
TAG EACH IMAGE WITH A LABEL



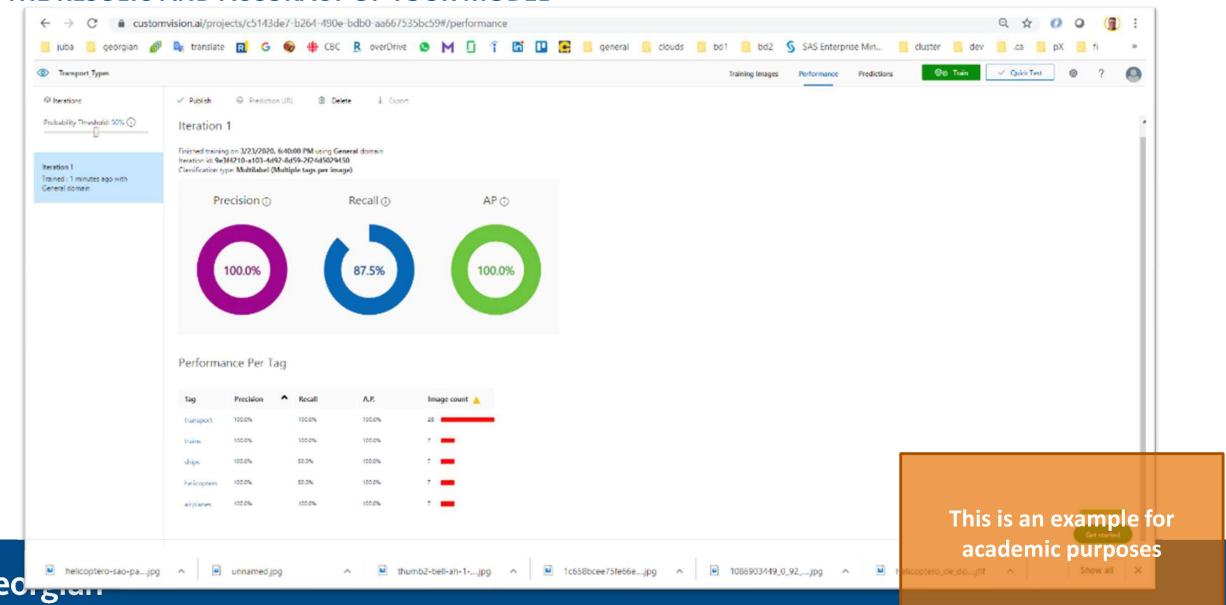
This is an example for

academic purposes

TRAIN YOUR MODEL WITH THE IMAGES AND TAGS



CHECK THE RESULTS AND ACCURACY OF YOUR MODEL



References





> References

- Big Data Analytics Program, 2019/2020 Georgian College, Barrie, Ontario
- Fair Learn GitHub Repository <a href="https://github.com/fairlearn/fai
- A Tutorial on Fairness in Machine Learning Ziyuan Zhong https://towardsdatascience.com/a-tutorial-on-fairness-in-machine-learning-3ff8ba1040cb
- GDPR Regulation (EU) 2016/679 (General Data Protection Regulation) https://gdpr.eu/
- AWS, Gartner Report, 2020 Magic Quadrant for Cloud, https://pages.awscloud.com/GLOBAL-multi-DL-gartner-mq-cips-2020-learn.html
- Microsoft, Azure Portal, https://portal.azure.com/#home
- Microsoft, Custom Vision, https://www.customvision.ai/
- NY Times, https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html
- Wisetrend, https://www.wisetrend.com/on-premise-vs-cloud-ocr-data-capture-licensing/
- BMC Software website, https://www.bmc.com/blogs/saas-vs-paas-vs-iaas-whats-the-difference-and-how-to-choose/
- Cleo.com, https://www.cleo.com/blog/knowledge-base-on-premise-vs-cloud
- Wikipedia, Al Accelerator, https://en.wikipedia.org/wiki/Al accelerator
- Wikipedia, Application-specific integrated circuit, https://en.wikipedia.org/wiki/Application-specific integrated_circuit
- Lambda, website, https://lambdalabs.com/gpu-workstations/vector
- Microsoft, Azure Data Platform End-to-End, Implement a Modern Data Platform Architecture, Official Material



> References (2)

- Big Data Analytics Program, 2019/2020 Georgian College, Barrie, Ontario
- Lambda Architecture, Databricks, website, https://databricks.com/glossary/lambda-architecture
- NetApp, What is NVMe?, website, https://www.netapp.com/data-storage/nvme/what-is-nvme/
- Gpost, What is a NVMe M.2 SSD and How Fast is it? Website, https://www.groovypost.com/reviews/what-is-nvme-m2-ssd-drive-how-fast-is-it/
- Al Benchmark.com, website, https://ai-benchmark.com/
- Juniper Networks, What is AI for networking?, website, https://www.juniper.net/us/en/products-services/what-is/ai-networking/
- Leaseweb blog, website, https://blog.leaseweb.com/2019/07/04/infrastructure-requirements-ai/
- Data Iku, ebook, 2021 Trends: Where Enterprise AI is headed next?
- PwC, Responsible Al Survey 2020
- Stanford University, Machine Learning Systems Design, Chip Huyen, cs329s.stanford.edu
- Microsoft, Success by Design Implementation Guide, First Edition, 2021
- Microsoft Learn Courses & Certifications website, https://docs.microsoft.com/en-us/learn/



f Georgian **END OF DAY 3**