



# cosmiQ works<sup>®</sup>

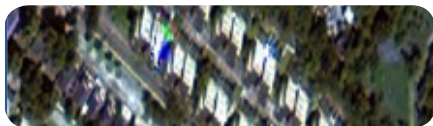
**Prototyping the Future Geospatial Analytics Cycle**

CosmiQ Works is an applied research lab at IQT focused on developing, prototyping, and evaluating emerging open source artificial intelligence capabilities for geospatial use cases.

Interested in collaborating with us?  
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# Evaluating Each Aspect of Geospatial Machine Learning

2019 – 2020 Projects



## SpaceNet® 4 Challenge

SpaceNet 4 tasked participants to extract building footprints from varying levels of high-resolution off-nadir imagery.



## SpaceNet 5® Challenge

SpaceNet 5 focuses on extracting roads, routes, and travel times from high-resolution satellite imagery.



## RarePlanes Simulated Data

Explores whether if augmenting training data with synthetic data increases the performance of AI models to detect and classify aircraft types or models.



## Super Resolution Trade Study

Analyzes how imagery super-resolution methods impact the performance of object detection models applied against satellite imagery.



## Model Robustness Study

Quantifies how much training data is necessary to achieve a certain level of deep learning model performance.



## Solaris Software Suite

An open source software python suite designed to support the entire geospatial machine learning workflow, from dataset preprocessing to final testing and evaluation.