

# AI for Earth Observation

## MARKET NEED

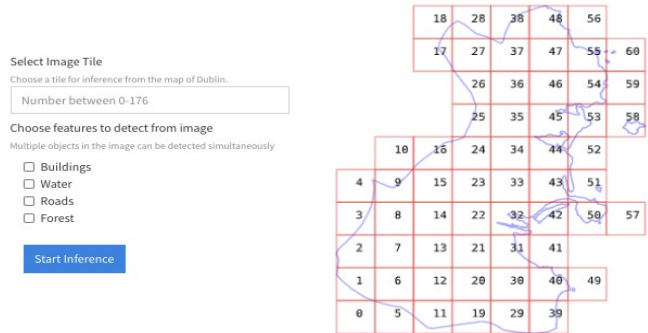
Earth Observation (EO) is a booming industry with many wide ranging applications. The sheer volume and complexity of EO data requires the application of novel AI algorithms. AI-based computer vision models have been emerging as effective and efficient tools to analyse and extract essential insights from EO imagery data.

However, applying such models to EO imagery requires access to large training datasets, as well as relevant machine learning and satellite imagery skills, making it difficult for researchers, scientists, and companies to develop or test their use-cases.

## TECHNOLOGY SOLUTION

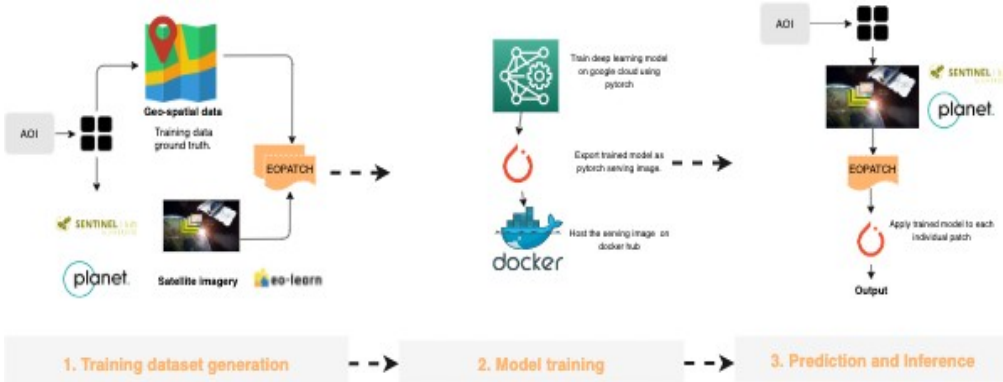
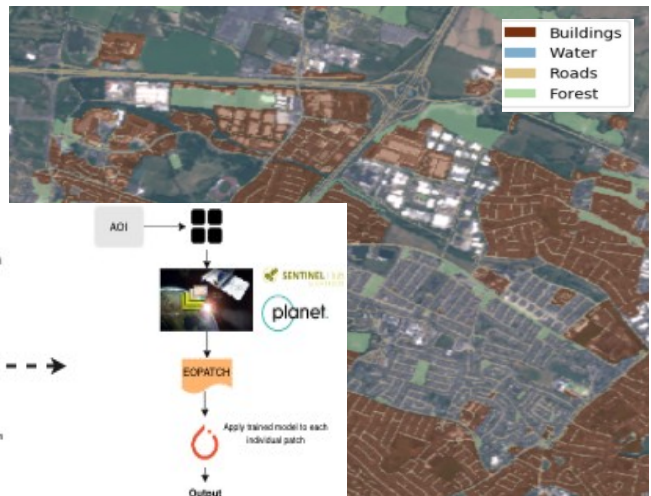
We developed a flexible pipeline that integrates and aligns EO imagery with complimentary annotation data sources, such as OSM, to create annotated EO data. It further automates state-of-the-art best practices for training and evaluating deep learning models specific to EO imagery.

A web application has been developed to demonstrate how this pipeline be used for the identification of features and land use types in satellite imagery of Dublin and Cork.



## APPLICABILITY

The pipeline and demonstrator can be used for training custom models for bespoke features and artefacts, and evaluating their performance.



### Demonstrator Interface