Aerial and satellite imagery gives us the unique ability to look down and see the earth from above. It is being used to [measure deforestation](https://www.bu.edu/research/articles/satellite-maps-deforestation/), [map damaged areas after natural disasters](https://www.hotosm.org/updates/2017-03-15_imagery_released_for_cyclone_enawo_to_support_mapping_activities), [spot looted archaeological sites](http://journal.frontiersin.org/article/10.3389/fict.2017.00004/full), and has many more current and untapped use cases.

The goal of semantic segmentation is to automatically label each pixel in an image with its semantic category.

|  |  |
| --- | --- |
| Vehicles | Yellow |
| Trees | Green |
| Buildings | Blue |
| Background | Red |
| Low Vegetation | Sky-blue |
| Imprevious Surfaces | White |

**DATASET**

https://www.kaggle.com/bkfateam/potsdamvaihingen

**Tools**

* Google Collaboratory – preinstalled library files enables us to work more efficiently(google drive and GPU must be enabled )
* Otherwise Anaconda environment (required library files must be installed manually.