

Dataset Documentation

Name:

ramp Building Footprint Training Dataset - Accra, Ghana

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Version:

1.0

Citation:

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Description:

This chipped training dataset is over Accra and includes high-resolution imagery (.tif format) and corresponding building footprint vector labels (.geojson format) in 256 x 256 pixel tile/label pairs. This dataset is a ramp Tier 1 dataset, meaning it has been thoroughly reviewed and improved. This dataset was used in developing the ramp baseline model and contains 1,330 tiles and 40,786 buildings. The original dataset was sourced from the [Open Cities AI Challenge Dataset](#) before the drone imagery was resampled to 30 cm and the labeled data were improved.

Keywords:

Urban, Dense

Methodology:

This dataset is part of a collection of building footprint training datasets produced as part of the Replicable AI for Microplanning ([ramp](#)) project. Each dataset covers a specific region or city and they cover a diverse range of geographies.

This dataset is generated using an existing labeled dataset based on very high resolution drone imagery from [Open Cities AI Challenge Dataset](#). First, source imagery was downsampled to 30 cm spatial resolution to match the other training datasets in the ramp collection. Next, all building footprint labels were reviewed manually and improved as needed to match the quality and definition of a building footprint in the ramp collection.

Building footprint in ramp datasets is defined as a polygon that captures the entirety of a structure's rooftop, as opposed to capturing the base of the building and the building

facade. The minimum structure size for collection is roughly 5m². Polygons are drawn to delineate the actual structure and in case their footprint has been obscured by a tree or shadow, the edges are inferred. Structures that are connected to one another but represent individual buildings/entities have been annotated as separate but touching polygons. In some of the AOIs, such as the ones in Dhaka, Bangladesh the partially constructed buildings, oftentimes with no roof, have been labeled as buildings.

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