

Population count clustering over Thailand

My project
ended with a
trip to
Thailand,
travelling in
Bangkok.



Google Earth Engine was used
to extract
population count
data over Thailand
in coarse frames
over 2000-2020.

Optical flow is a
numerical
scheme used to
infer the
velocities of
pixels across
frames.



A type of neural network
called an **autoencoder** is
used to produce efficient
representations of input
data. We have designed
an autoencoder that can
locally encode individual
pixels based on their
values in multiple
dimensions.

K-means and **DBSCAN**
algorithms are used to
cluster the encodings
from the autoencoder
and produce a
segmentation of the
image data. **Cosine
similarity** is then used to
match the clusters in
consecutive frames.

