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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.

