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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.