DATA CLEANING

We face two key challenges early on: splicing maps and aligning the training data. The Google Maps API only allowed us to extract small images which we needed to splice together. This splicing did not work out well:

For image/label alignment we would use ImageNet to manually match the two images. The labels were noisy so we used SLIC to find similar regions which we relabeled with the dominant label.

ALGORITHM: SEGMENTATION

We primarily used the SLIC segmentation algorithm for the first half of our pipeline, experimented with several different algorithms for the classification step. SLIC is expected to work well as evidenced by this image with pixels labeled with the average pixel value.

ALGORITHM: RECOMMENDATION

The SVM module would take in the training class, longitude and latitude as the input and uses Radial Basis Function (RBF) as kernel, to find the best-fit curve for the given input data and produces Recommendation Model as output.

RESULTS:

Denoising of images has been completed and classification efficiency elicited.