Satellite Data

1. Went to USGS & downloaded 8 images
2. Clipped to city
3. Run through FLAASH
4. Split out into bands (?)

Reference Data

from Cope:
1. Download
2. randomly divide polygons into training & testing group by category

from Gmis:
1. Download (GeoTIFFs)
2. ?

* could lose Gmis

Methods

RF x3 (one is current method used by WUDAPT) - primarily defaults

CNN x2 - had to figure out "optimal ~~training~~ structure"

Classification Scheme

RF = S1, S2, S3

S1 ~ control (WUDAPT)

S2 adds more spectral info

S3 uses context of surrounding squares

CNN = S4, S5

S4 - seems like more of a straightforward "throw the data in the model"

S5 - uses context

* could only do 2

Modelling & accuracy assessment

raw model 10x for robustness check

* could do WAY less of all of this

assessed accuracy w/ 4 metrics - OA, OA_{URB}, OA_{nat}, F1 score (or 3?)

Selected 1 model to map LCZ for each city based on OA & OA_{URB}

McNemars test for significance of differences

Transferability Experiments

tried LCZ models on 4th city from other 3 bests