[redacted]

Limitations

Optimal Transport

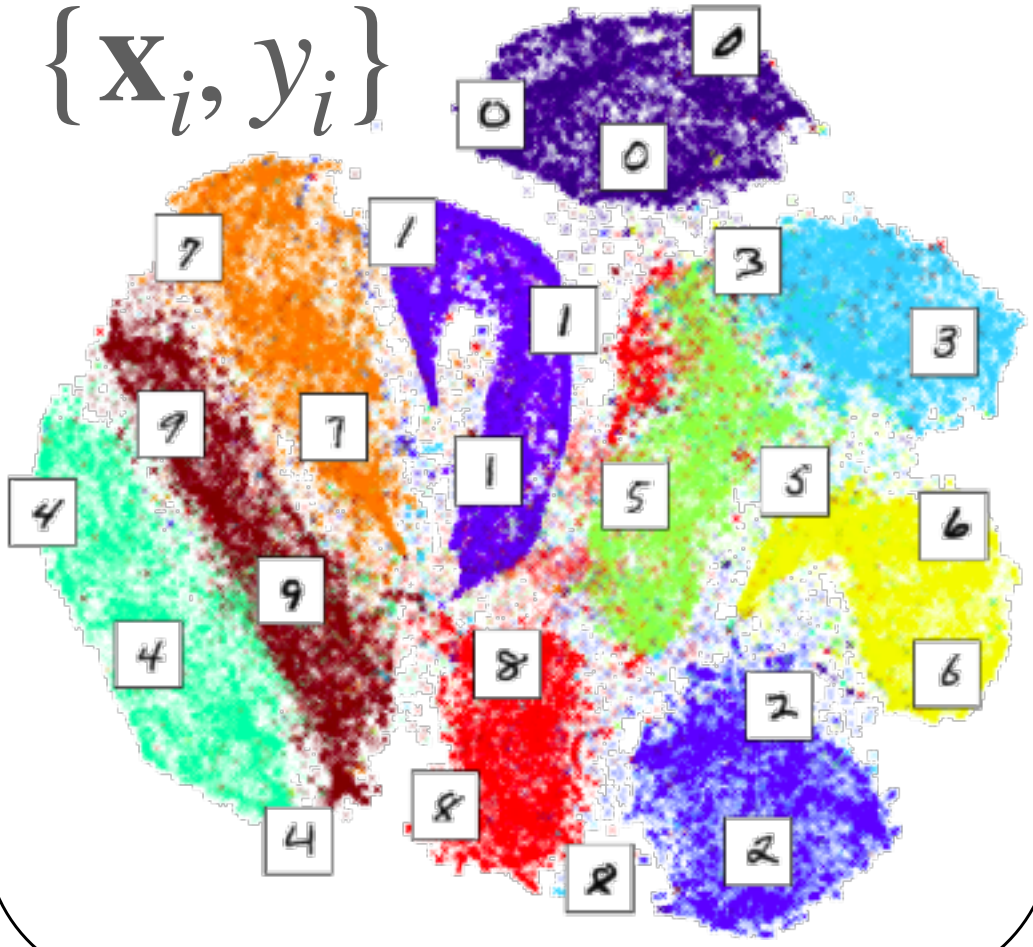
17

- Doesn't incorporate frequently occurring *structural* information

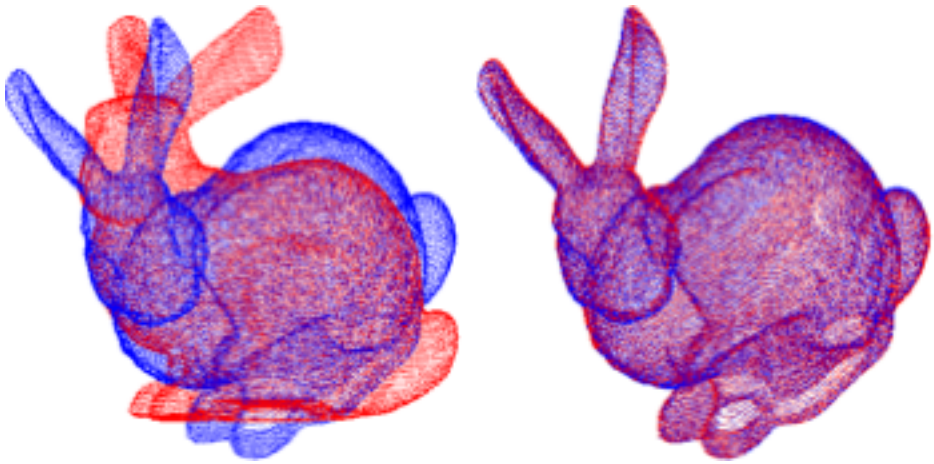
- Goal of this thesis: extend OT to leverage it => expand applicability in ML

LABELS

$\{\mathbf{x}_i, y_i\}$

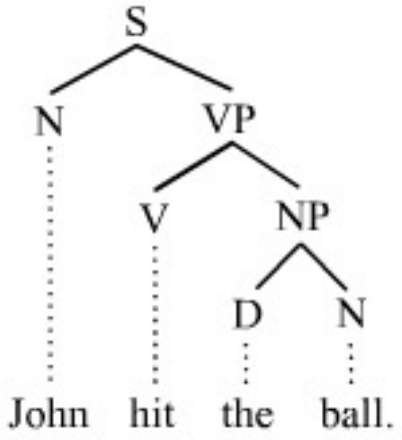


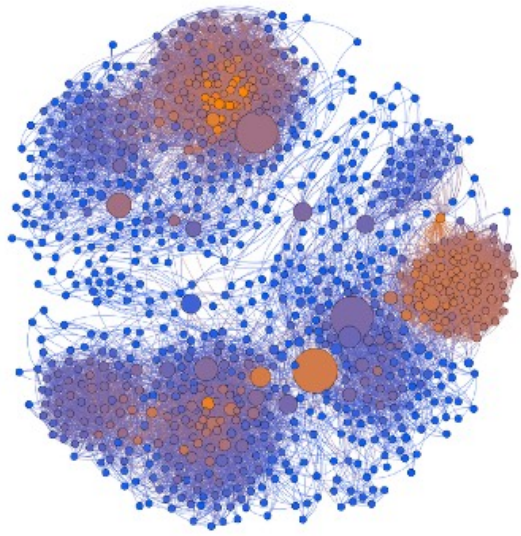
GEOMETRIC INVARIANCES



Images: [1] nlml.github.io, [2] By Tjo3ya [3] mathworks

STRUCTURE

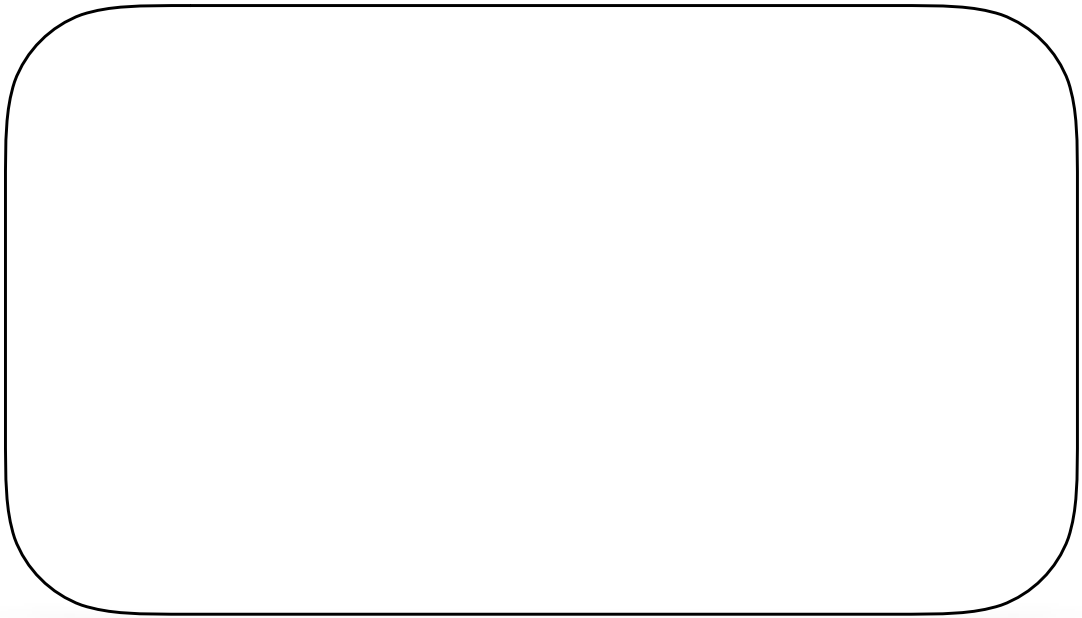




```
5'ATGACGTGGGGA3'
3'TACTGCACCCCT5'
```

an Overview

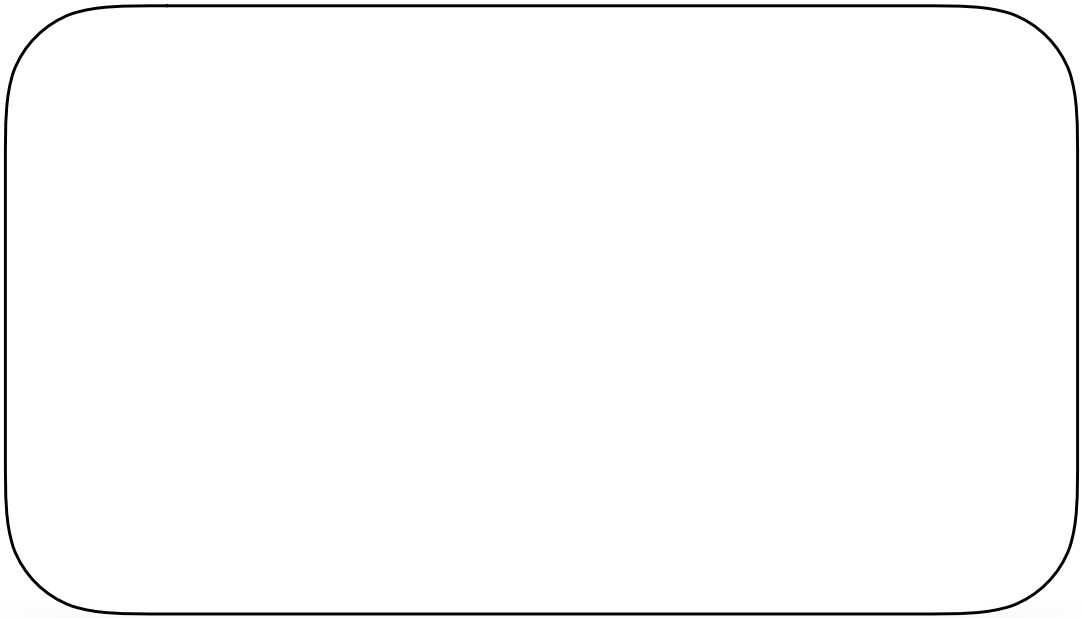
This Thesis:



Part I:

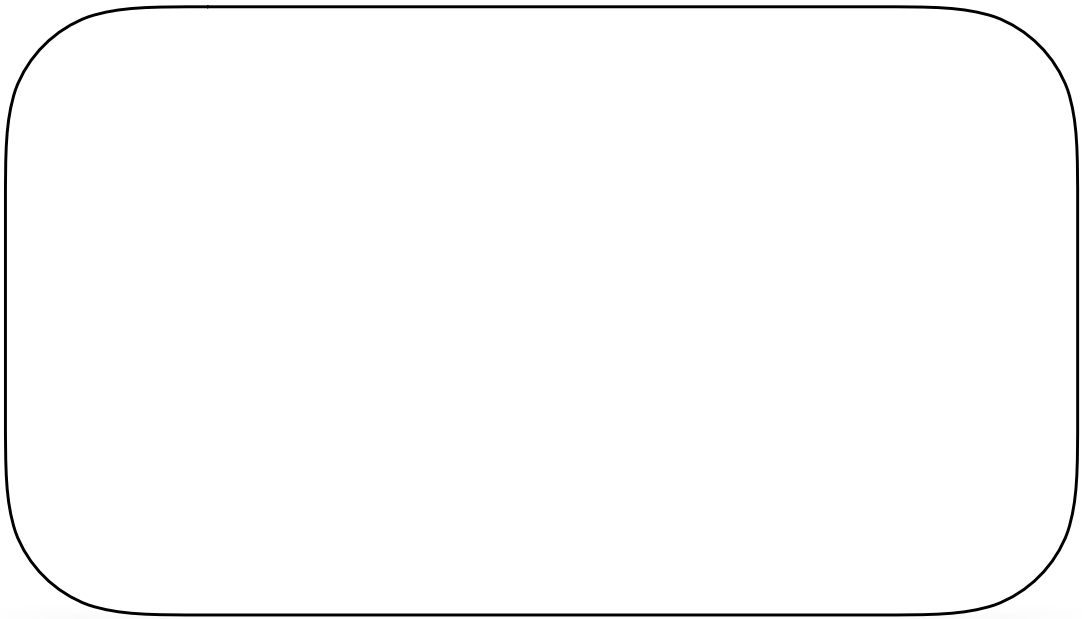
OT with

Structured Costs



Part II:

Global Invariances



OT over

Part III:

Hyperbolic Spaces

AISTATS '18

EMNLP '18 & AISTATS '19

In Submission