

# CS 6170: Computational Topology, Spring 2019

## Lecture 15

Topological Data Analysis for Data Scientists

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# Summary of Project 1

- Part 1:
  - *Octa* data set is sampled from a quadruple torus
  - It contains 4 large tunnels and 4 small internal tunnels.
  - The most persistent 1-dimensional feature of the *Shape* data set corresponds to the tunnel.
- Part 2:
  - Many students love apples! :-)
  - Many used boundary points for persistent homology computation
  - Dim 0 bars appear to be boring (many bars of  $[0, 1)$  due to adjacent pixels); however their distributions can still be meaningful.
  - Dim 1 might be more interesting for most images.

Continue with Lecture 14