

Key Points:

1. Project Explanation:

- Prakhar used an analogy of a cup and its handle to describe the segmentation process—how objects with similar shapes may still have variations.
- The goal is to segment different parts of an object (e.g., a skull) in an unsupervised manner, using clustering techniques.

2. Challenges Faced:

- Prakhar initially wanted to segment the skull into distinct parts in an unsupervised manner but faced issues with clustering not yielding coherent results.

3. Alternative Approach:

- Instead of clustering, Prakhar suggests a direct registration method:
 - Manually segment the lower jaw.
 - Match it against other skulls by fitting the segmented part onto other point clouds.
 - Use a likelihood function to determine the best fit.

4. Potential Backup Plan:

- If the registration method doesn't work, Prakhar suggests using 2D segmentation models:
 - Render images of the skull from different angles.
 - Segment 2D images and then map them back to 3D.