Update for Spring Quarter:

1. Draw new center line: draw perpendicular center lines base on the original center line, find the middle point of end while pixel on the perpendicular, connecting all middle points.

2. Get white color area along the perpendicular line of new center line: this task contains three parts: whole area of the perpendicular line, upper area of perpendicular line. Lower area of perpendicular line.

3. Other details: smooth the new center-line would cause deviation new center line

4. Current problem: not accurate to find the peak position (see ppt)

Fall Quarter:

1. Solve the peak position inaccurately problem.
2. Estimates the parameters for the major axis of an undulated seal whisker based on 2D scans
3. Optimizes the parameters for a generic 3D whisker to match the shape of a real 3D whisker
4. Optional: If there is time, the student could participate in either refining the CT scanning, segmentation, and smoothing procedure, or in the analysis of the data, including principal component analysis of the parameters.