Optimizing Jaccard, Dice, and other measures for image segmentation
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The Intersection over Union (IoU) measure of segmentation quality has become the standard in many image segmentation datasets for computer vision. At the same time, the Dice score dominates evaluation in medical image analysis. In this talk, we will cover fundamental properties of these and related measures including approximability results, submodularity, and optimization. We will highlight mathematical relations, software tools, and principles for incorporating these measures into statistical learning.