Auto Segmentation of Spine CT for Data-Intensive Analysis of Surgical Outcome

• Motivation
  • Currently spine surgery outcomes have high variability
  • “Spine Cloud” - a big data approach to improve spine surgery outcome
  • “Spine Cloud” requires a large database of segmented spine CT images

• Method
  • 3D-Based Graph Cut Optimization

• Results
  • N20 Average Dice Coefficient >0.7
  • N200 performing well for typical spine morphology

Member(s): Jeff Siewerdsen, Tharindu De Silva
Mentor(s): Ben Ramsay, Niko Eng