

CACTAS-AI: Automatic Segmentation of Calcified Plaque in Carotid Arteries

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Manual segmentation of calcified plaque, essential for assessing stroke risk, is time-consuming, and conventional methods like 2D and 3D UNet often struggle with the small size. We developed **CACTAS-AI**, a *two-step segmentation process*. This approach outperforms baseline methods in plaque segmentation, as shown in the table.

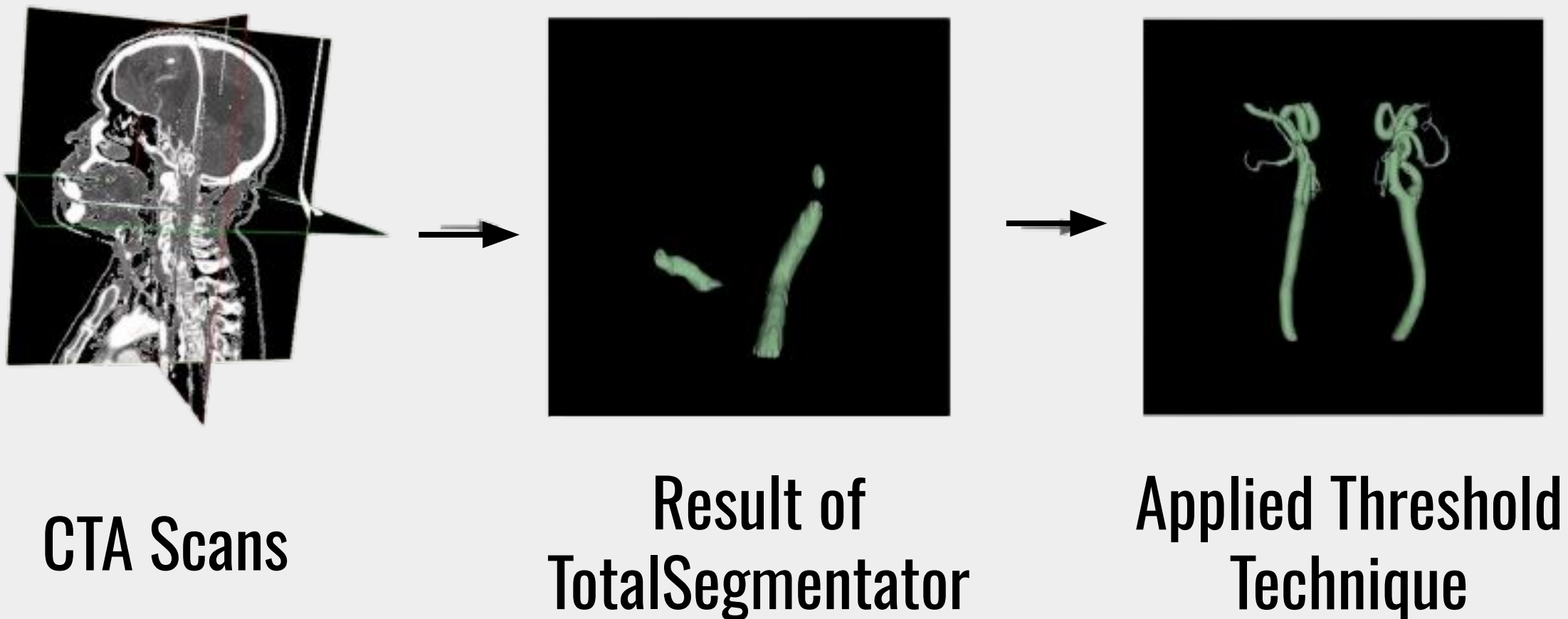
Segmentation with mask improves IoU from 0.3868 to 0.9412

	2D UNet	3D UNet
Best Performance	0.9412	0.8095
Cross-Validation	0.7114	0.6230

All free and open source.



1st step: Segment carotid arteries



2nd step: Segment calcified plaque in carotid arteries

