

# A 3D Light weight network for Plant part segmentation and Architectural trait extraction

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Plant part segmentation

Plant architecture

LiDAR



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Bio-Sensing and  
Instrumentation Lab



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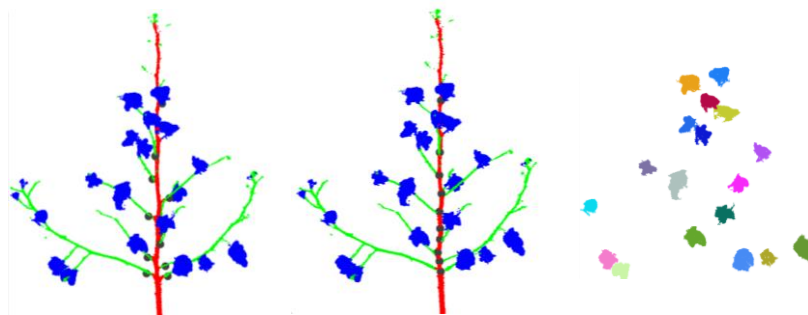
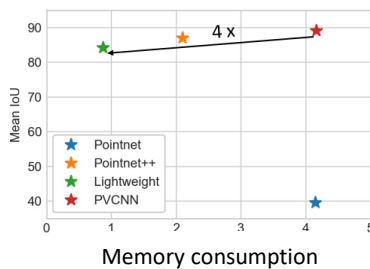
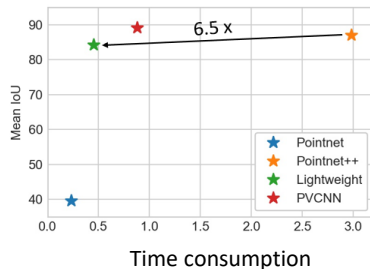
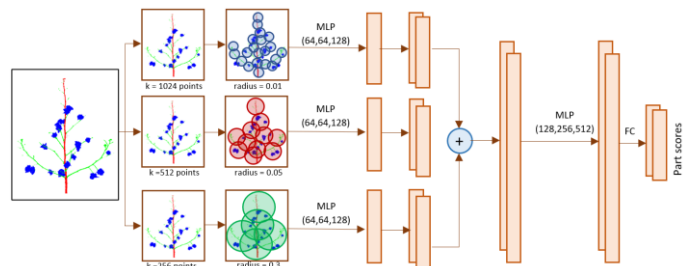


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## Classical 3D segmentation network – Pointnet++

- Using a single set abstraction layer.
- Different #samples in multiscale neighborhood aggregation.
  - ❖ Less #samples for large neighborhood.
  - ❖ More #samples with small neighborhood.

## Light weight network

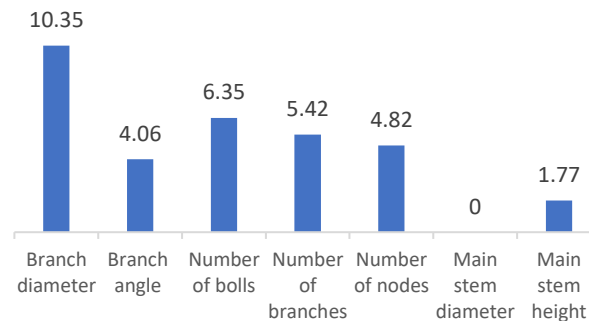


Branches

Nodes

Bolls

Mean absolute percentage error (%)



Cotton  
Incorporated



GEORGIA  
COTTON  
COMMISSION