

Detecting Vanishing Points using Global Image Context in a Non-Manhattan World

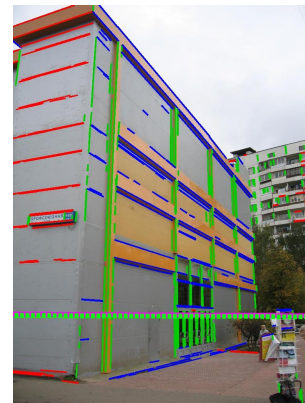
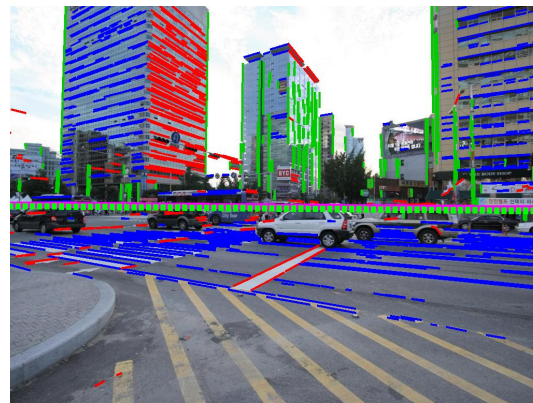
Menghua Zhai

Scott Workman

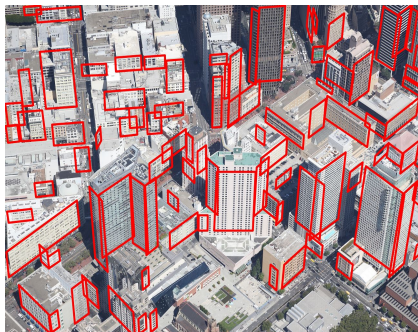
Nathan Jacobs



Goal: Localize Horizon Line and Vanishing Points



Uses of Horizon Line and Vanishing Points



Facade Detection
J.Liu and Y.Liu (CVPR
2014)



Image Mensuration
A.Criminisi, I.Reid, and A.
Zisserman (IJCV 2000)



Pedestrian Detection
D.Hoiem, A.Efros and M.
Hebert (CVPR 2006)

Workflow of Previous Methods



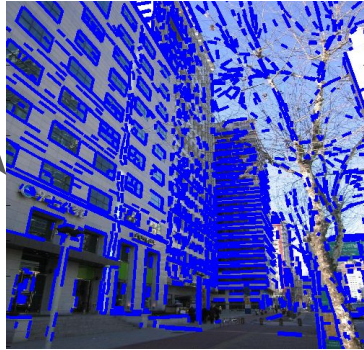
Input Image

Workflow of Previous Methods

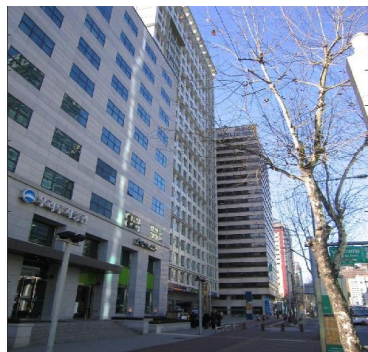


Input Image

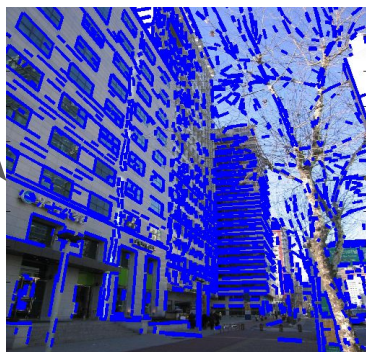
Line Segments



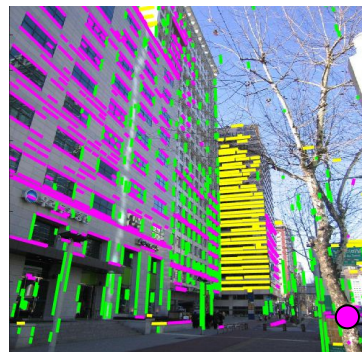
Workflow of Previous Methods



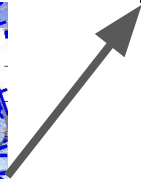
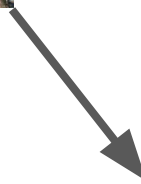
Input Image



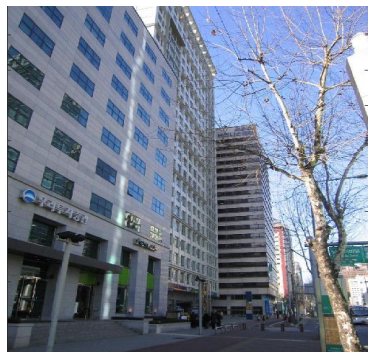
Line Segments



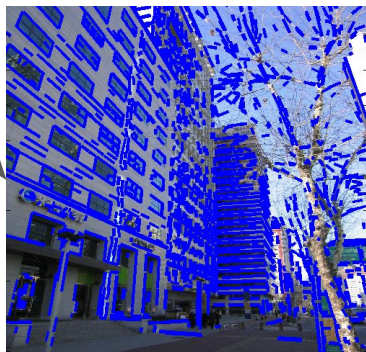
Vanishing Points



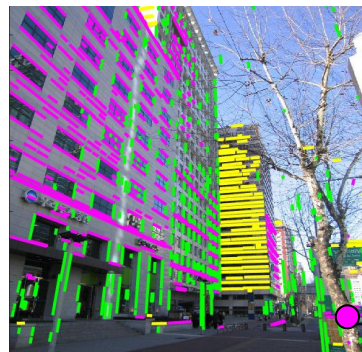
Workflow of Previous Methods



Input Image



Line Segments



Vanishing Points



Horizon Line



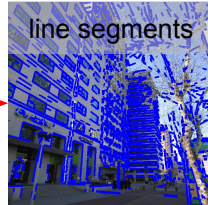
Workflow of Our Method



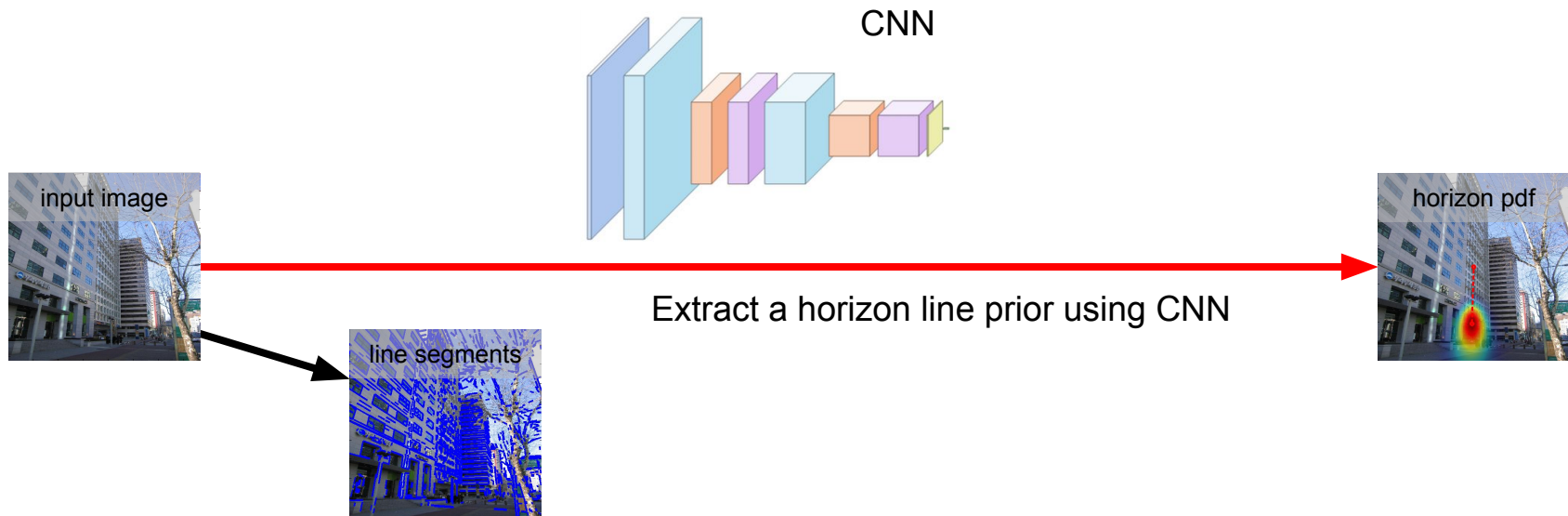
Workflow of Our Method



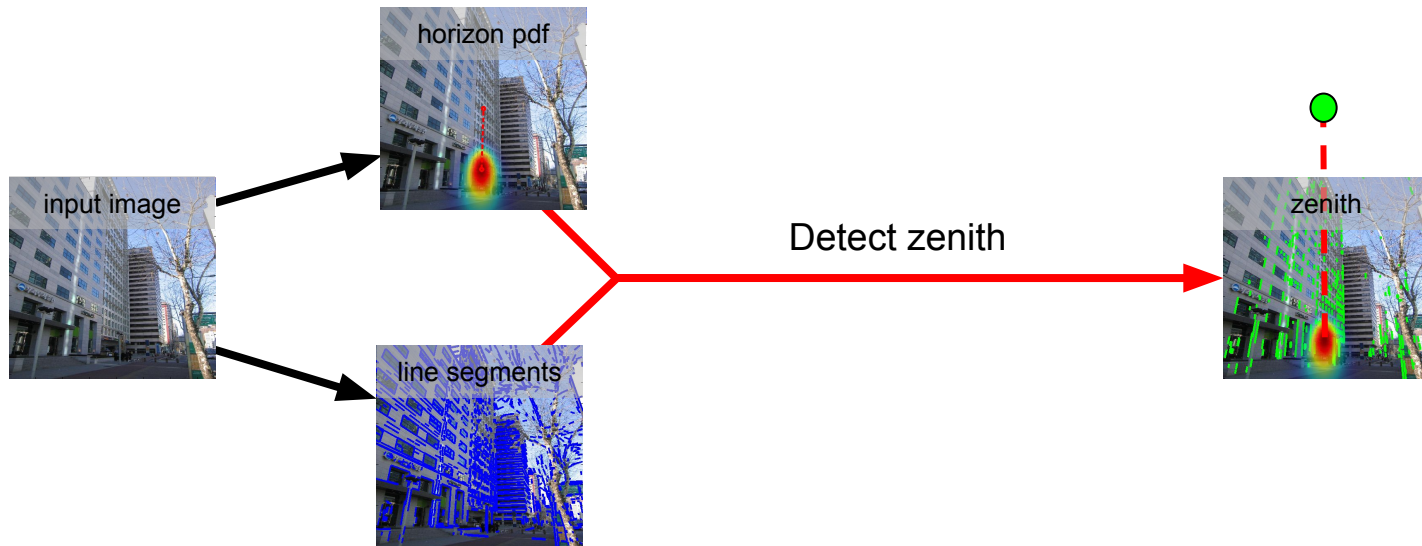
Extract line
segments



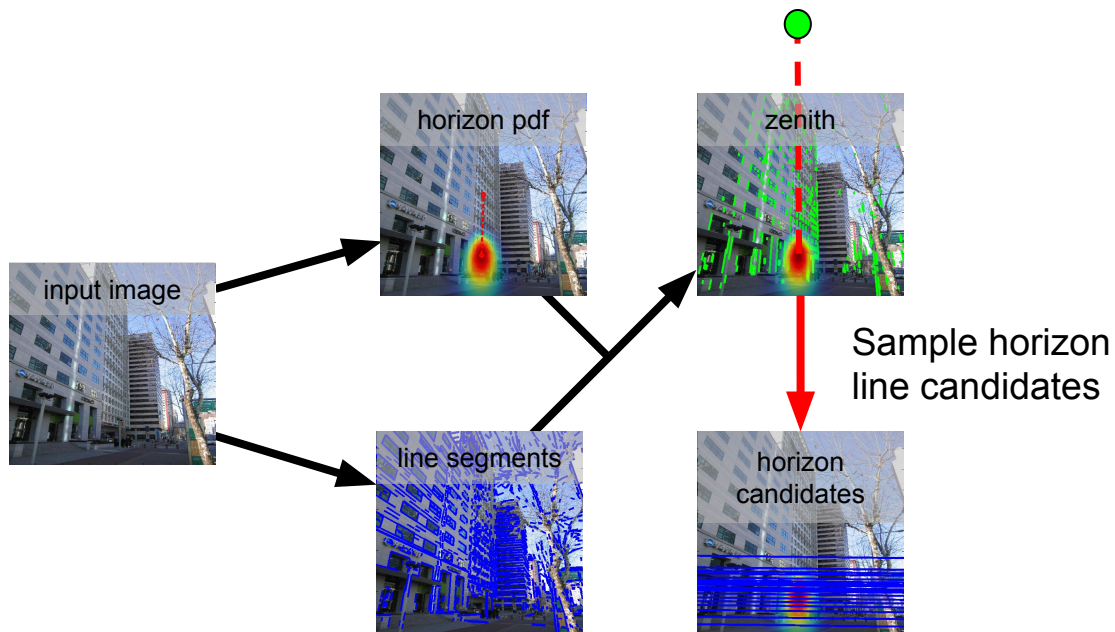
Workflow of Our Method



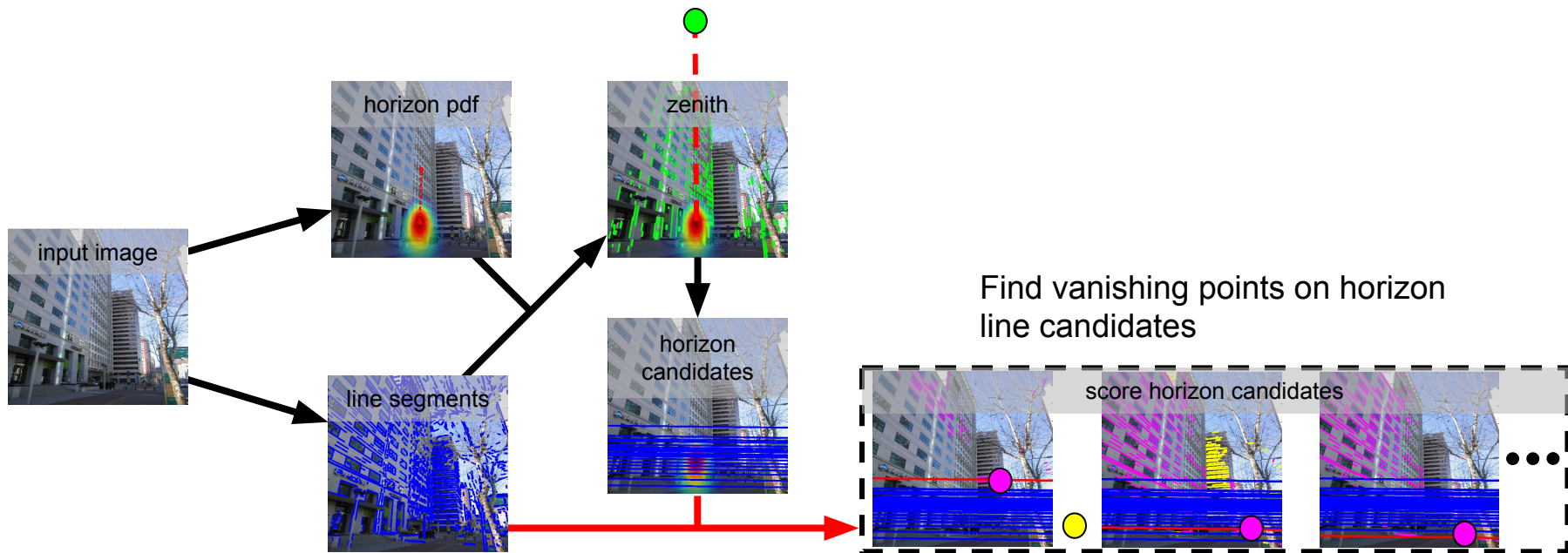
Workflow of Our Method



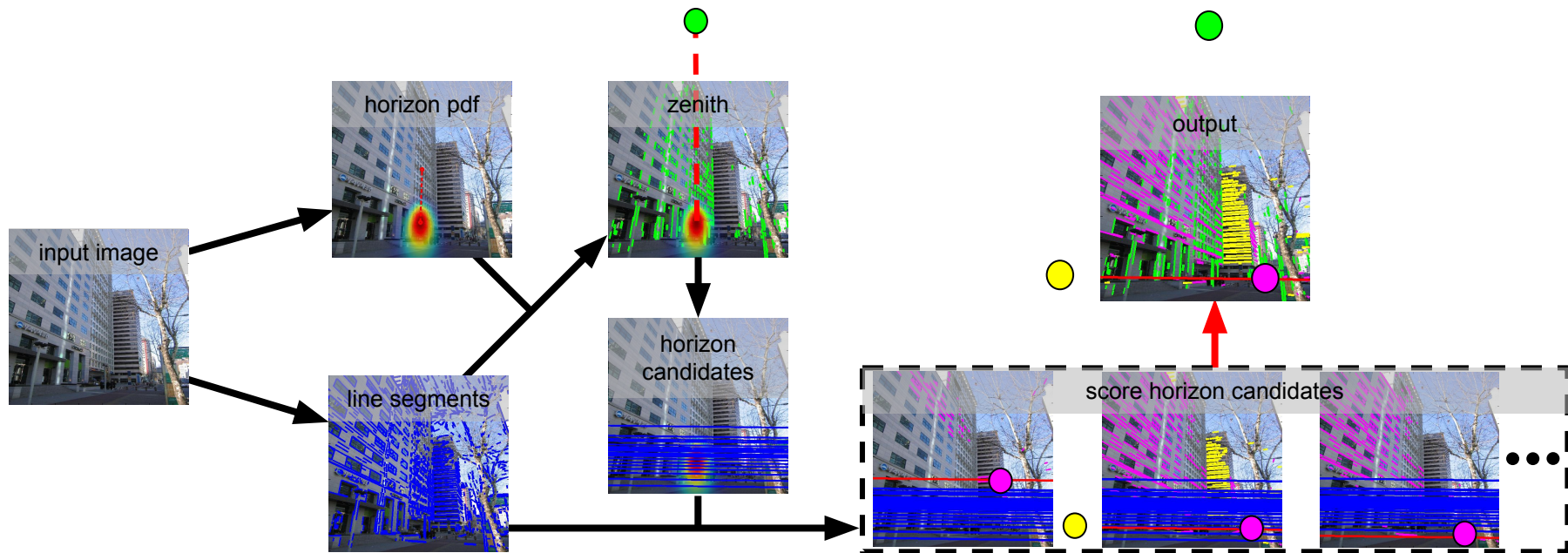
Workflow of Our Method



Workflow of Our Method



Workflow of Our Method



State-of-the-Art Performance



Thank You!

Poster #: 39

<http://cs.uky.edu/~ted/> (code available)

