Egocentric Height Estimation

Project Summary

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Problem and method

- We want to estimate the height of an egocentric camera
  - Changing background
  - Scene moves with camera wearer
- Trained an SVC and different CNNs



Waist



Chest

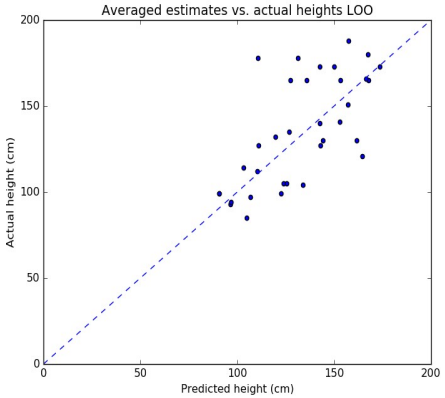


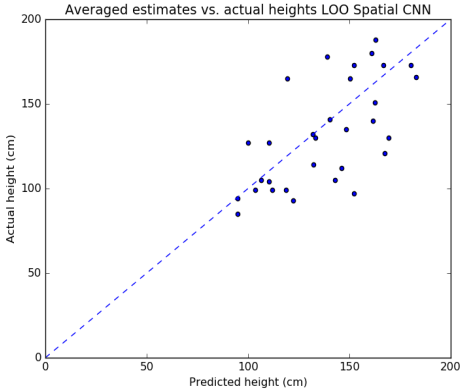
Head

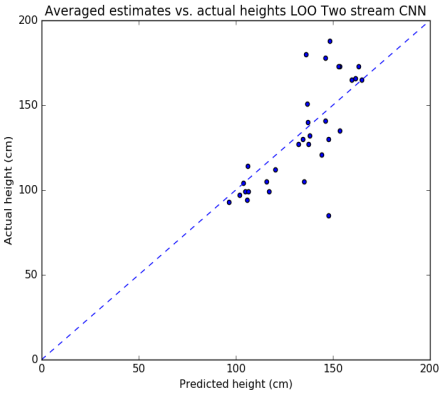
Results

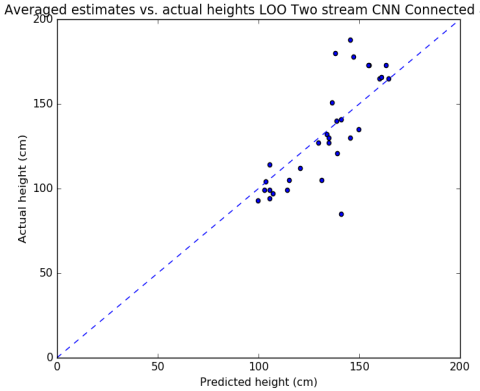
	3 bins	5 bins	11 bins
Accuracy	64.69%	61.15%	44.2%
Kernel/Descriptor	Linear HOG	Linear HOG	Linear HOG

Best results- SVC









	Mean Absolute Error (cm)	Mean Squared Error	r^2
Temporal Network	18.03 cm	549.28	0.4557
Spatial Network	19.51 cm	602.54	0.4267
Two-stream- Connected at final output	14.53 cm	323.98	0.5773
Two-stream- connected at 50 neurons	**14.04 cm**	**303.48**	**0.6505**