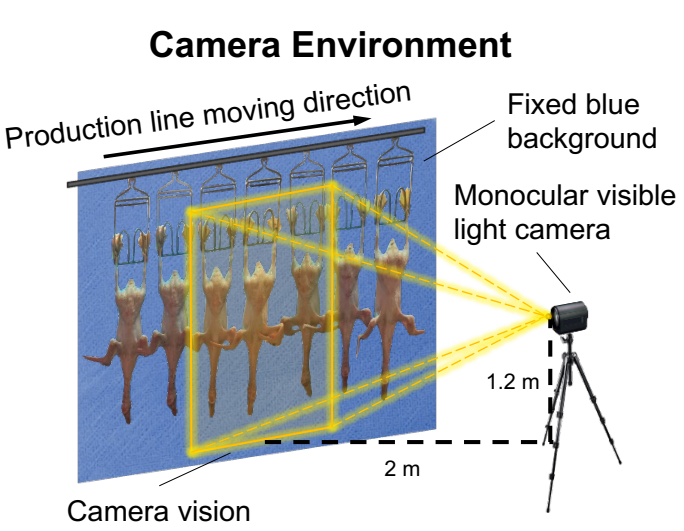
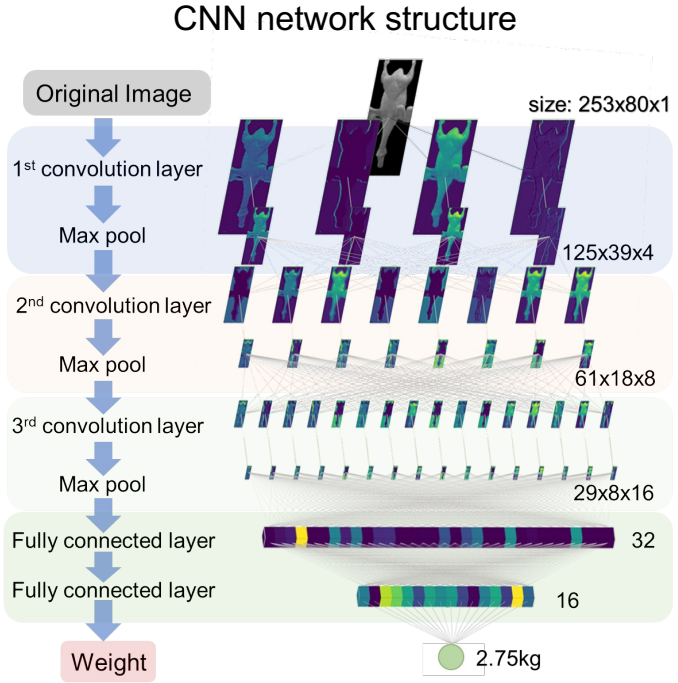
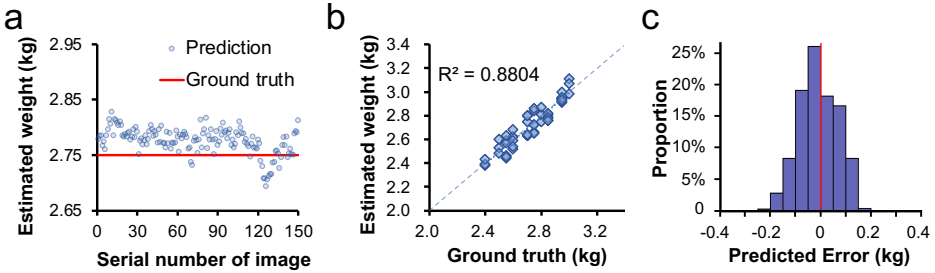
Online Estimating Weight of White Pekin Duck Carcass by Computer Vision

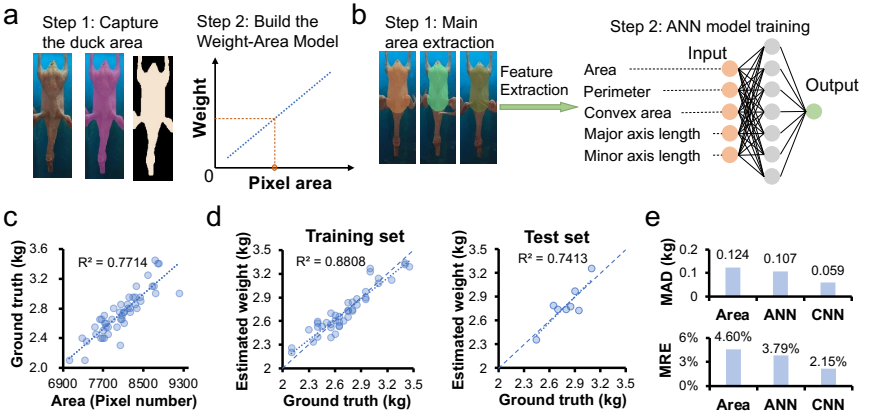




Online Image Weighing

This was achieved by a new image-based weighing method. Compared with previous methods, our method automatically abstracts features and greatly improves the accuracy of weight estimation.





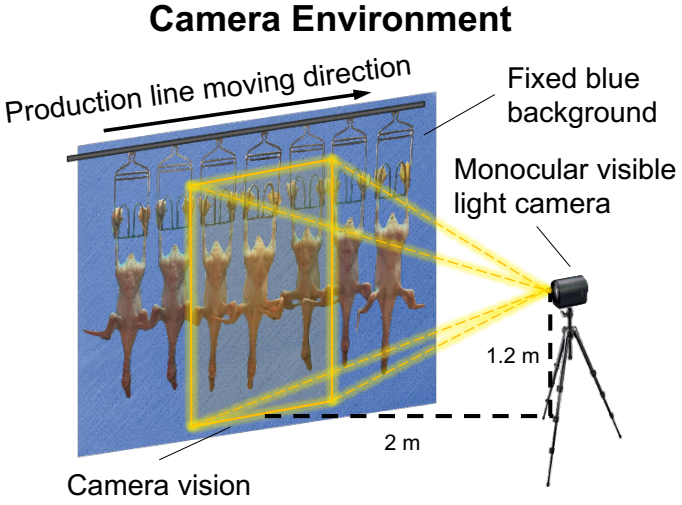
Performance:

- MAD: 58.8 grams
- RMSE: 63.6 grams
- MRE: 2.15%
- Cve: 2.33%
- R^2: 0.8804

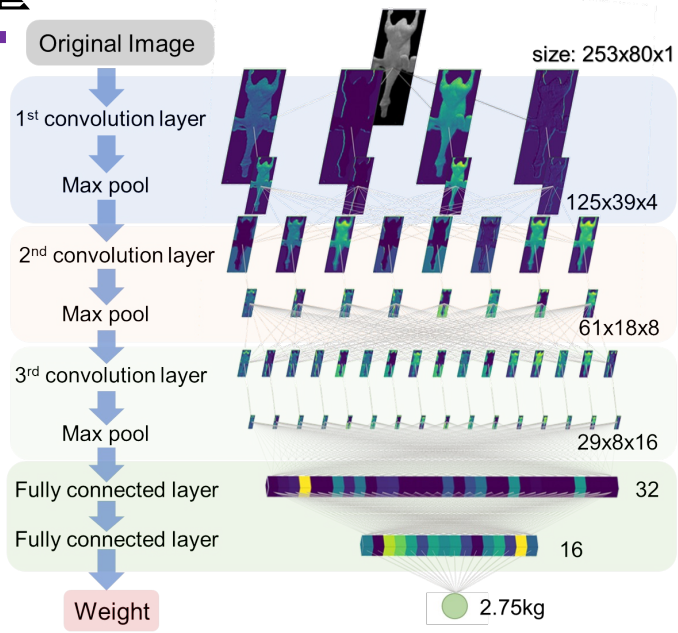
2 widely used methods: **pixel area linear regression,** **64.7 grams↓, 52.4% ↓** **ANN regression** **48.2 grams↓, 45.0% ↓**

Ruoyu Chen, Yuliang Zhao, Yongliang Yang, Shuyu Wang, Lianjiang Li, Xiaopeng Sha, Lianqing Liu, Guanglie Zhang, and Wen Jung Li. "Online Estimating Weight of White Pekin Duck Carcass by Computer Vision." *Poultry Science* (2022).

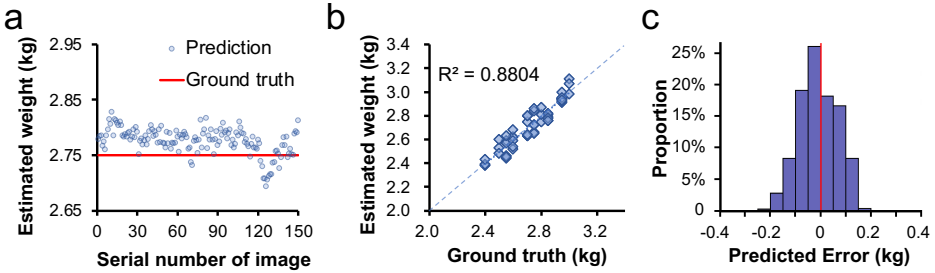
通过计算机视觉在线估算北京白鸭胴体重量

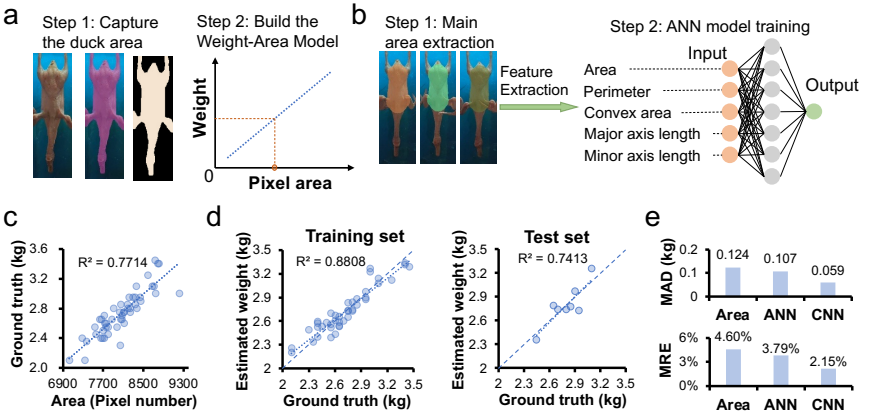


实时图像称重



这是一种新的基于图像的称重方法。与以前的方法相比，我们的方法自动提取特征并大大提高了重量估计的准确性。





性能：

- MAD: 58.8克
- MRE: 2.15%
- R^2: 0.8804
- RMSE: 63.6克
- Cve: 2.33%

两种常用方法：拟合像素面积，64.7克↓, 52.4% ↓　人工神经网络特征拟合 48.2克↓, 45.0% ↓

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