Data was collected over 2 days in a San Francisco senior home:
- **Thermal Data**
  - 8 frames/sec
- **Depth Data**
  - 24 frames/sec

We manually labeled 5 upper body joints for training: base of neck, left elbow, left shoulder, right elbow, right shoulder

---

**Methods**

2-branch 7-layer convolutional model to predict Confidence Maps of limbs and Part Affinity Fields for the relationships between body parts using all 5 labeled joints.

---

**Results**

Baseline: SVM for Joint Prediction

Baseline predicts location of only the neck base joint using 2 SVM’s: 1 to predict x position and 1 to predict y position.

Adapted RGB Confidence Map¹ and Part Affinity Field Model for Depth and Thermal Data

---

**Acknowledgements**

We thank the members of the Stanford Vision and Learning Lab, particularly Serena Yeung, for allowing us to use the Senior Home Data for the project, and providing us with GPU resources to train the models. We also thank Onlock for allowing us to collect data at their Senior homes. Finally, we thank Albert Haque and Sanyam Mehra for their useful comments throughout the quarter.

---

**Citations**