

# Complex Taxonomy Classification, Cognitive Load Management

A Fortune 50 home improvement retailer ID and classify furniture

- **Bounding boxes, key points, polygons, splines**
- Semantic segmentation
- Video annotation
- **Large taxonomy application**
- ML-assisted pre-labeling: object detection & classification
- Facial landmark detection
- Entity relationships & ID tracking
- Image analysis and assessment

**5x**  
the annotation rate for  
**127k**  
bounding boxes

**Project:** A Fortune 50 home improvement retailer required a variety of furniture to be identified and classified within 450 predefined categories for their computer vision project.

**Challenge:**

- Training the annotator to understand the nuances of all 450 categories
- Avoiding annotator burnout and mislabels
- Identifying overlapping objects in images with inconsistent resolutions and perspectives
- Hitting a minimum of 200 boxes per object type

**Solution:** Our team tested and distributed 22 workflows containing micro-tasks designed to reduce worker fatigue and error, used ML-augmented task-to-annotator skills matching, and increased annotator performance by building a 300 page training curriculum. Alegion delivered 127K bounding boxes at 5x the annotation rate of their original team, and shaved one month off the turnaround time.

