



# Training Models for Computer Vision the Right Way

## Should data scientists be labeling the data?

Data collection is the most critical aspect of enabling algorithm training—it can make or break your ML model. Yet acquisition of large-scale training data is the biggest bottleneck hindering data scientists, accounting for as much as **80% of a data scientist's time**. The challenge is industry-agnostic. The manual process of labeling large volumes of data and achieving high accuracy levels is a slow and costly process that enterprises often underestimate when building their AI teams.

## Key to quality ML data

Building precision training datasets with the degree of accuracy needed to train computer vision models requires three things: **contextual data preparation and task design**

with case-specific workflows, **expert data enrichment** by a curated team of human specialists trained to operate purpose-built annotation tools, and **data quality management** with the appropriate adjudication strategy.

## Fully managed annotation & data collection

Alegion's full-service platform accelerates enterprise AI model development by managing the full spectrum of image and video annotation services throughout the computer vision development cycle. A combination of human intelligence and machine learning enrich the source data to targeted accuracy, completely eliminating the need for data scientists to label the data or deal with the challenges of sub-par data quality.



### Data and Task Preparation

- Fully managed onboarding
- Secure data transfer via API
- Custom task design, data batching
- Multi-tier/conditional workflows



### Expert Data Enrichment

- Flexible crowd composition
- Data task distribution
- Specialist training & management
- Purpose-built annotation tools

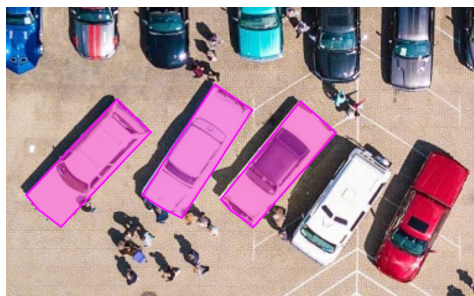


### Quality Management Controls

- Judgment consensus
- ML-augmented adjudication
- Gold data benchmarking
- Worker scoring

## How we accelerate computer vision initiatives

Our dedicated teams build a custom data preparation framework to integrate into any point of your AI workflow. The context-optimized annotation tools and workflows advance key computer vision capabilities such as object recognition, classification, and segmentation to deliver training datasets with up to 99.9%+ data accuracy.



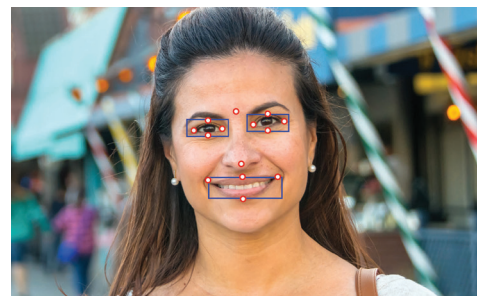
## Object Recognition & Classification

Every instance of an object class is identified and categorized with an axis-aligned bounding box, lines, keypoints, or polygons.



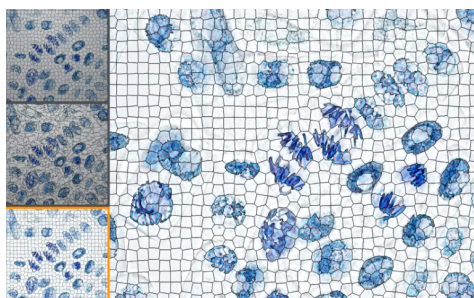
## ML-Augmented Object Tracking

Multiple algorithmic models are applied and evaluated to help specialists identify and track objects in high density video compositions.



## Part ID & Object Relationships

Physical parts and expressions are captured via keypoints or bounding boxes for facial recognition and sentiment analysis model training.



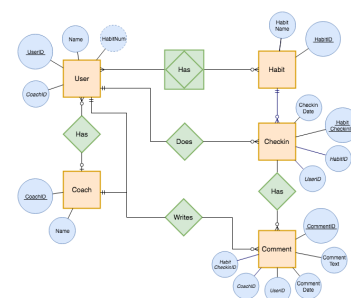
## Instance & Semantic Segmentation

Multiple Superpixel algorithms deliver accurate pixel-level segmentation for biomedical, retail automation, and autonomous vehicle applications.



## Purpose-Built Annotation Toolsets

Our use case-optimized tools are built to expedite the annotation tasks, validate the output against gold data, and dynamically determine when escalations are needed.



## Entity Relationships

Contextual relationships across objects within images and videos identify subject behavior and intentions.

## Gold data in, gold model out

Building a competitive edge for your computer vision model comes from building case-specific training datasets and eliminating the need to invest valuable data scientist time on collecting, enriching, and validating large-scale datasets. Alegion's platform injects human expertise and machine learning augmentation into your AI model development to deliver gold-level training data, increasing model success rates and freeing data scientists to focus on innovation.

To learn how we can accelerate your computer vision model development, contact us at [solutions@alegion.com](mailto:solutions@alegion.com).

**About Alegion:** Established in Austin in 2012, Alegion provides an enterprise AI training data platform and services that span the AI lifecycle by integrating human intelligence and machine learning into enterprise-scale training data collection, model validation, and exception handling. Alegion's platform serves Fortune 500 companies across **retail, automotive, technology, government, healthcare, and financial** industries, achieving **99%+ data accuracy** and high customer satisfaction with a **Net Promoter Score® of 94**.

Learn more at [alegion.com](http://alegion.com)