



PRECISION LIVESTOCK COUNTING



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Meat Scientist  
JBS

“ We were amazed at the speed at which Plainsight’s vision AI achieved a very accurate solution in all conditions, saving us significant resources, time, and money. We’re now rolling out their AI solution across multiple locations. ”

PROJECT CHALLENGES

Accurate livestock counts impact the entire production process and are crucial to profitable operations. Counts are typically conducted by manual processes that are prone to human error and inconsistencies. Environmental complications like low-light conditions, weather, mud, and fast-moving animals add further complications.



MANUAL PROCESSES

Historically, livestock counting was a fully manual process, reliant on people and prone to potentially costly human errors.



ERRORS

Human counting was inaccurate for rapid, repetitive movement, and visually similar cattle and pigs, often in dense groupings.



ENVIRONMENTAL FACTORS

Rain, snow, steam, mud, shadows, poor lighting, and other factors thwarted traditional manual processes.



LOSSES

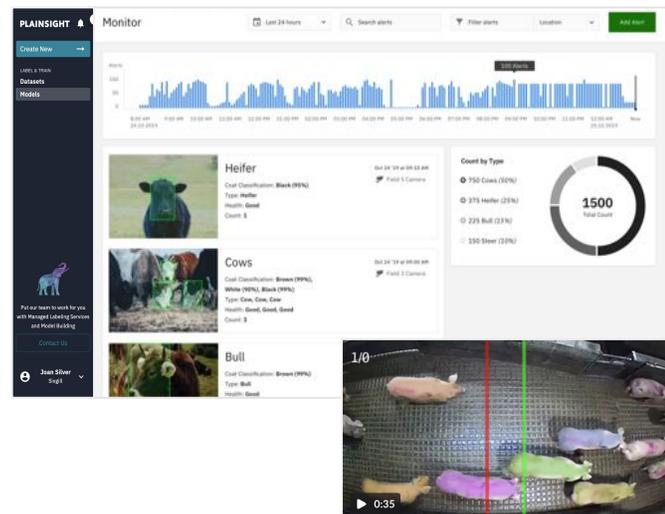
With each cow costing between \$980 and \$1,200, the cumulative 3% revenue loss added up to hundreds of millions in annual losses.

PROJECT SOLUTIONS

Plainsight approached JBS’ challenges holistically with rapid immersion into the organization’s goals and built an understanding of the operational processes and the environments in which livestock counting takes place. With a focus on solution efficacy and accuracy, Plainsight orchestrated the improvement of video stream data collection for training datasets and created custom object detection and tracking models. Plainsight quickly exceeded JBS’ accuracy goals and outperformed a prior competitor’s solutions.

Plainsight connected JBS’ video feeds to custom-built edge vision AI applications, automating detection, tracking, and counting across multiple locations and for different types of animals.

JBS is rolling out Plainsight solutions nationally and Plainsight is both providing ongoing managed services and innovating additional solutions for JBS sites, including animal health monitoring.



COUNTING

Plainsight deploys vision AI models specifically trained for JBS’ diverse and environments for accurate automatic livestock detection, counting, and tracking.



MONITORING

Plainsight manages all cameras and video feeds, and annotates datasets for model training and analysis, including solutions for health monitoring.



BENCHMARKING

Plainsight optimizes computer vision solution performance with monitoring and management with metrics benchmarking for continuous improvement.



ANALYSIS

Plainsight automates counts and predictions and sends them to JBS’ Google Cloud Virtual Private Cloud (VPC) for shared insights and analysis via centralized dashboards.

## PROJECT RESULTS

Plainsight quickly introduced a new livestock detection model capable of counting and tracking animals with greater than 99.8% accuracy. Beyond livestock counting, Plainsight's solutions support holistic understanding, transparency, and traceability across the entire supply chain. JBS is positioned to iterate on existing models and identify opportunities to introduce solutions to additional locations around the globe. Success metrics include:

**3+ Year**

Relationship

**~40K**

Head of Cattle Per Day

**100%**

Of All Pork Received

**10s of Millions**

Livestock Counted

**Hundreds of Thousands**

Hours of Video

**Hundreds of Millions**

ROI Per Year

## Succeed with Production-Ready Vision AI Solutions Customized for Your Use Cases and Devices

Plainsight delivers comprehensive strategies, fully managed services, and full-lifecycle vision AI solutions leveraging:

- Intelligent image and video data curation
- Integrated AI-powered data labeling
- Automated SmartML™ for model training
- Plainsight Pipelines™ for standardized data workflows
- Flexible deployment to cloud, VPC, edge, or on-premises
- Ongoing solution monitoring, maintenance, & oversight

Plainsight provides the unique combination of **AI strategy, a visual data science toolset and deep learning expertise** to develop, implement, and oversee **transformative computer vision solutions** for enterprises.

**Request A Call**

Talk to us about your computer vision needs and how we can help.



### Speed

CV data volumes can be 100x traditional AI & require advanced visualization. We provide streamlined end-to-end CV lifecycle management integrated in one product.

See value in days, not months



### Accuracy

Rapid, continuous iteration achieves accuracy through an integrated product, AI-driven data discovery, & repeatability enabled by versioning & pipelines.

Maintainable, repeatable improvement



### Production

Plainsight standardizes & centralizes the data collection & model iteration process in order to maintain accuracy in production environments.

Codified, automated workflows



### Oversight

Long-term CV success requires software, Humans In The Loop, & standardized pipelines for repeatability with transparency & responsible model maintenance.

Responsible CV management & monitoring



JBS® USA is a leading processor of beef and pork in the U.S. and a leading processor of beef in Canada. JBS USA represents the North American arm of JBS® S.A., the world's leading animal protein processor with more than 240,000 team members worldwide, more than 300 production units and export customers in more than 150 countries.



**PLAINSIGHT**

Plainsight provides the unique combination of AI strategy, a vision AI platform, and deep learning expertise to develop, implement, and oversee transformative computer vision solutions for enterprises. Through the widest breadth of managed services and a vision AI platform for centralized processes and standardized pipelines,

Plainsight makes computer vision repeatable and accountable across all enterprise vision AI initiatives. Solving problems where others have failed, Plainsight empowers businesses across industries to realize the full potential of visual data with the lowest barriers to production and fastest value generation for long-term success.