



SmartOne

Client Case Studies

Your Trusted AI/ML Training Data Partner

Our Diverse Portfolio of Success Stories

- With deep expertise spanning various industries and use cases, we invite you to submit your AI/ML training data challenge to us and discover how we can tailor our solutions to meet your unique needs.



AGRICULTURE



AUTONOMOUS
VEHICLES



EDUCATION



ECOMMERCE



HEALTHCARE



LOGISTICS



PRESS & MEDIA



SECURITY &
MAINTENANCE

And more...



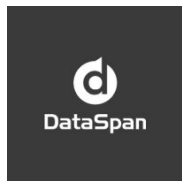
SmartOne



SURGAR
Surgical Augmented Reality



bonial



Sky
Visor



HARVARD
UNIVERSITY



Dahlia
Robotics



CHAPMAN
UNIVERSITY



جامعة الملك عبدالله
للعلوم والتقنية
King Abdullah University of
Science and Technology



“SmartOne is for me the best data labeling company in the world!”

– **BR, Co-Founder & President (>\$1b US AI Company)**

“SmartOne has been a cornerstone for the success of our computer vision solution, thanks to their high-quality image annotation services. It is always a pleasure to work with them; thanks to the flexible, professional team members who are responsive for our ever-changing needs.”

– **Omer Sedes, R&D Director**

“We have called on SmartOne to support us in our audio data labelling project. We are very delighted with the level of expertise provided by the team whether it was on the technical consulting aspects or regarding the implementation.”

– **Jenny Ambukiyenyi, Onya Co-Founder & MD**

“We are very satisfied with the collaboration with SmartOne. The team has been responsive, deadlines have been met, and the annotations are of good quality. I will not hesitate to turn to them again for my future annotation projects.”

– **Lucas Nacsa, CEO of Neovision**

Road Safety Risk Assessment

Context

Road traffic crashes are the eighth leading cause of death globally. Improving global road safety and halving road fatalities by 2030 are among UN priorities. Camera surveillance is currently the most commonly used system for monitoring road safety.

Idea

The company leverages AI for autonomous vehicles to analyze traffic flows and prevent road crashes. The system monitors almost imperceptible risk factors to help anticipate accidents and take preventive measures.

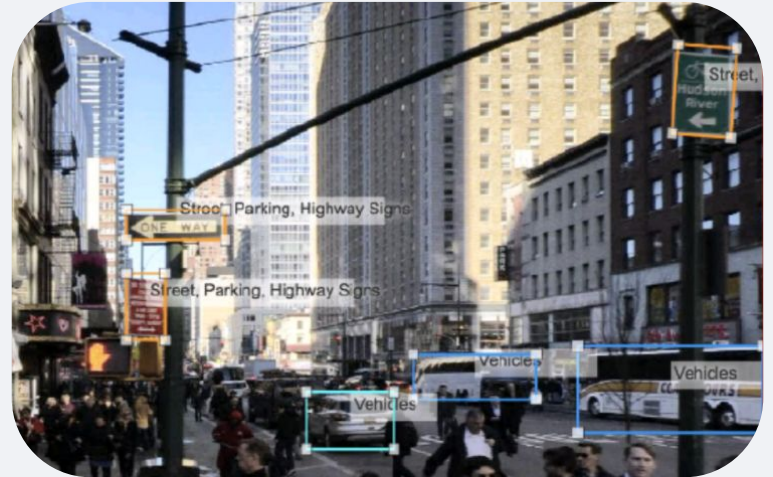
Pains / Challenges

The AI must recognize traffic signs and obstacles, and be able to evaluate if the obstacle is hazardous enough to enable autonomous braking. The training data has to be large and thoroughly labeled to give autonomous vehicles better reflexes than a human driver.

SOLUTION

Collision avoidance model training

The goal was to improve a vehicle environment recognition and reflexes. We applied object detection techniques for risk identification and risk assessment. Our team first segmented obstacles and signs with bounding boxes, then qualified the risk level between 1 and 5. Risks are ranked based on proximity, size, and hazard.



RESULTS

80% Decrease in at fault collisions

88% Object detection accuracy

91% Object detection recall

Autonomous Delivery Vehicles

Context

For E-commerces, deliveries are a day-to-day challenge from green footprint to cost optimization. Last-mile delivery is the most laborious and costly part of the delivery chain.

Idea

Our client is experimenting an autonomous delivery device, to reduce carbon footprint and the delay between ordering on the marketplace and the delivery to the customer without compromising safety

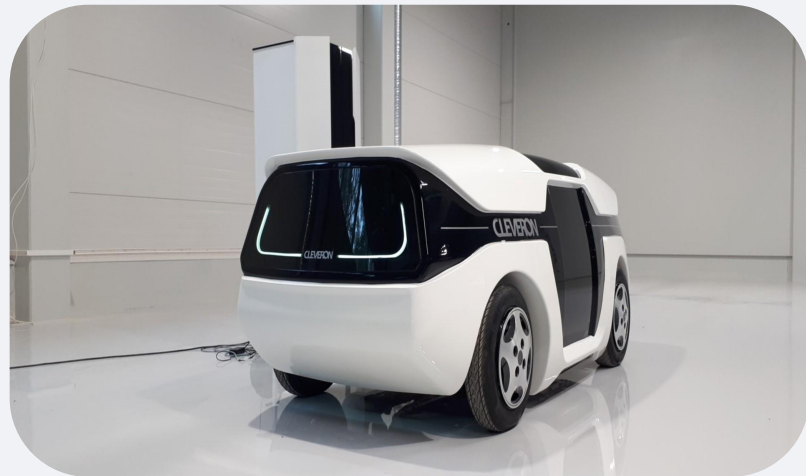
Pains / Challenges

The AI-powered device was still not mature enough in environment recognition to handle many variables such as obstacles, terrain variations, weather conditions in a completely autonomous function

SOLUTION

Large-scale smart data for self-driving models

Our work consisted in creating a thorough navigation map to ensure the device could manage real-world constraints efficiently and safely. We provided highly detailed and accurate training data at large-scale for the model to perceive its environment in a complex way. Our team labeled and validated images and videos of the delivery devices path and obstacles like lawns cars, animals, pedestrians, children... in multiple conditions



RESULTS



After extensive testing, the experience was successful. The device is currently being deployed across the U.S.

10%

savings in fuel costs made possible by the use of autonomous vehicles

40%

of delivery costs could be reduced by the use of autonomous vehicles according to a McKinsey study

Gen AI - Damage Detection

Context

For hard to collect datasets, Gen AI is a valuable option for companies who need some specific work to be done on niche use cases. Models' validation remains an essential part of the generation of these datasets.

Idea

Our client want to assess the fidelity of crack generation within images depicting train wheels. Leveraging advanced AI methodologies, we aim to segment and evaluate the quality of cracks based on predefined criteria.

Pains / Challenges

The variability in crack patterns and lighting conditions necessitate the integration of sophisticated image processing techniques, as well as ensuring the reliability and consistency of human ratings across different evaluative criteria.

SOLUTION

Large-scale smart data for self-driving models

Our approach involves the development of a comprehensive evaluation framework tailored to the specific requirements of assessing crack generation in AI-generated images of train wheels. We meticulously curate a diverse dataset encompassing a wide array of crack patterns, lighting conditions, and environmental contexts to facilitate robust model training. Leveraging state-of-the-art image segmentation techniques, we meticulously annotated and validated the dataset to ensure the accuracy and reliability of ground truth labels.



RESULTS

98%

Crack detection and validation accuracy

25%

Estimated time reduction for inspections

40%

Risks of failure decreased by 40%

Intelligent Asset Management

Context

The risks and costs associated with asset inspection are significant. Current processes entails ground-based survey teams costs, unnecessary components replacements, the necessity to use manned aircraft and significant risks associated to manual exploration

Idea

Our client provides drone mapping solutions that enable aerial infrastructure inspection from the safety of desktops, intelligent visualisation and analytics softwares for major industries in Australia.

Pains / Challenges

The drones provided high-quality images, but the AI was not efficiently able to detect and assess the extent of damages, and thus unable to provide actionable insights to structure managers and engineers.

SOLUTION

Large-scale aerial training data for pattern recognition

Drone inspections use ultra-high resolution image capture devices, Lidar and thermal imaging to gather data. High-quality labeled datasets play a crucial role

in fueling these technologies. We manually trained and validated the drone's model to accurately differentiate rusted parts from normal surfaces, and then detect signs of destructive and active corrosion.



RESULTS



Granular data collected from drone mapping, and around \$42,000 additional income from efficient repairs that a manual inspection would have missed.

25%

Drone assessment are typically completed in half to a quarter of the time of traditional inspections.

US\$5.9bn

Cumulated estimated cost savings (2020-2050) from the use of drones in infrastructure in Australia, according to a Deloitte Report



Predictive Maintenance

Context

The conventional wind turbine maintenance process involves stopping the turbines and manually inspecting the towers using ropes and harnesses. The process is hazardous, costly and takes 1 day to inspect 2 turbines. The outage results in a huge loss of income.

Idea

With drones inspection, the client aims to deliver more qualitative data than those obtained by manual inspection. The drones are able to pinpoint defects invisible to the naked eye, anticipate potential damages and execute the inspection in minutes.

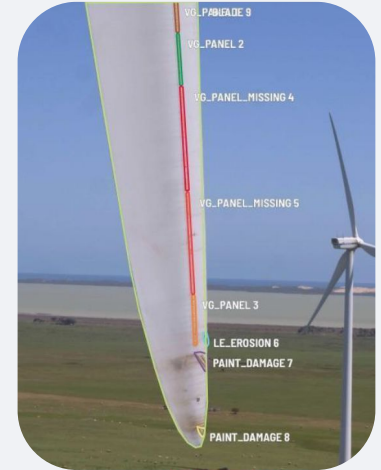
Pains / Challenges

The client wants to make the drone's AI sophisticated enough to be able to efficiently meta-tag, analyze and classify footage data. The amount of data needed to train the model was too large for the client internal team to deal with.

SOLUTION

Large-scale aerial training data for predictive analysis model

Our team went through thousands of images, to enable the drone to deliver a level of data accuracy and insight that is hard to achieve manually. We trained the machine to detect, categorize and classify anomalies on the wind turbines, in order to estimate the need for a maintenance team on-site intervention.



RESULTS

12

The number of wind turbines inspections that drones can perform per day, compared to 2 for manual inspection

20%

Lower-cost inspections: drone inspections are priced at around 20% of the cost of manual inspections

90%

Of decrease in revenue lost due to downtime



Automated Accounting

Context

Processing financial forms is costly and time consuming. It requires the mobilization of a manual extraction team and slows down customer service and delivery. Furthermore, processing financial paperwork rapidly with old procedures is prone to errors and can have major consequences.

Idea

Our client's machine learning-powered solution aims to streamline the document processing, reduce errors, improve efficiency and more importantly, give valuable insights to the end user through Intelligent Process Automation.

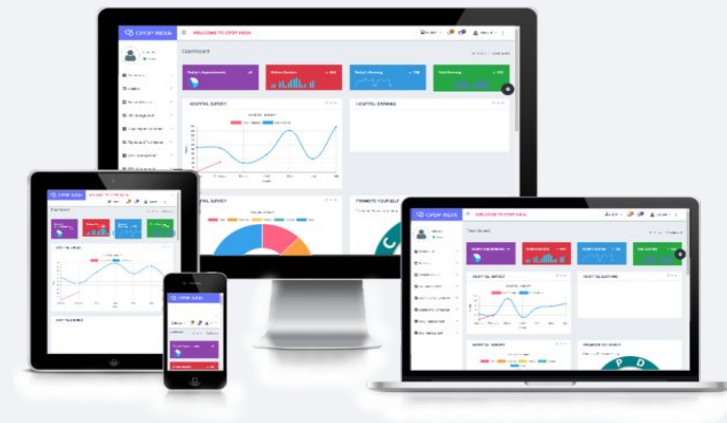
Pains / Challenges

Most of the data is unstructured and the OCR algorithm used to recognize data from scanned documents falls below an acceptable threshold. It is very difficult to achieve at least 90% automation from OCR models on scanned documents.

SOLUTION

Smart data for automated financial documents processing

Our work consisted in giving the cognitive technology the capacity to process autonomously and intelligently critical insights from financial documents. Through a large volume of financial data, the financial software AI was trained to improve image quality prior to processing, and then identify key data: price, date, type, category...



RESULTS



More insights in spending behavior, through bank transactions classification and receipt and invoice data reading

35%

Decrease in manual document processing costs, by combining automation with redesigned operational processes

99%

Accuracy rate

Virtual Apparels Try-On

Context

52% of internet apparel orders are replaced or refunded due to fit issues. In 2020, the cost of apparel returns amounted to \$101 billion, according to the National Retail Federation. Retailers have been trying to perfect virtual try-on for some years.

Idea

Our client's solution aims to allow customers to get perfect fitting clothes, by virtually trying on clothes, with just a picture of themselves. The application scans the customer body and determines the right clothing size.

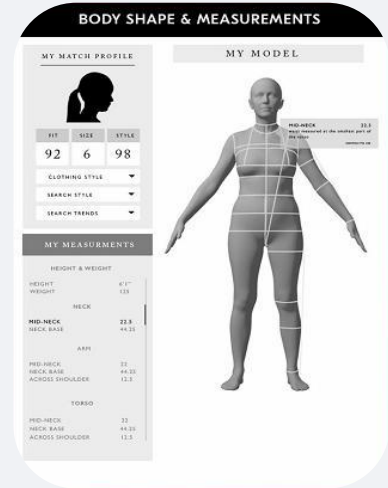
Pains / Challenges

The application need a substantial amount of diverse body-type scan data to be able to accurately predict sizes from pictures. A limited set of data points may strongly be biased, not sufficiently granular and result in inaccurate sizes estimations.

SOLUTION

Large-scale training data for AI virtual fitting model

The goal is to make different body sizes recognizable to machines and map clothes onto bodies. With the huge diversity of existing body shapes, the starting point is data. Our annotators trace with key points multiple body shapes images. Then, they validate the 3D shape produced by the model (mesomorph, ectomorph, endomorph...) to determine size ranges and fit intent.



RESULTS

77%

Reduction in refund or replacement due to wrong fit issue.

62%

Improvement in conversion rate compared to the traditional size chart

94%

Global conversion rate expected after implementing the AI feature

Augmented Reality Shopping

Context

The competition between brick-and-mortar and e-commerce shops is strong. But when it comes to brand activations, physical storefronts still make more sales because clients prefer to view, handle, and test the items before purchasing them.

Idea

The solution proposed is an AI that combines the advantages of the retail experience and an online store: the model allow customers to visualize the furniture and other items in 3D in their home before buying it.

Pains / Challenges

The model transforms 2D images taken by customers into 3D objects, but tiny, similar pieces and occluded objects remain difficult to be detected, rendering deformed and blurred 3D assets.

SOLUTION

Enabling a 2D to highly-accurate 3D modeling with training data

Our work consisted in transforming 2D objects into 3D augmented reality. Our Smarters shape the contours and texture of the products received in 2D, and remove or replace corrupt data. The model then generates a 3D product. The Smarter then works on a post-processing check of the generated asset and corrects the remaining defects of the image (contours, details, texture...)



RESULTS

< 1/25px

The model is currently able to generate 3D assets with an accuracy smaller than 1/25 of a pixel.

5%

It's the maximum errors reported after intensive training of the model

30x

30x more engagement on the online store after implementing the AR experience

Compound Classification

Context

Drug designing is a costly and time consuming process: chemists have to synthesize new molecules to test experimentally that they possess the right properties. They create new molecules and iterate until they find the molecules that meet the criterias.

Idea

Our client combine its expertise in post-translational control mechanisms and AI algorithms to accelerate the development of drugs for patients living with rare genetic disorders, through molecules property prediction.

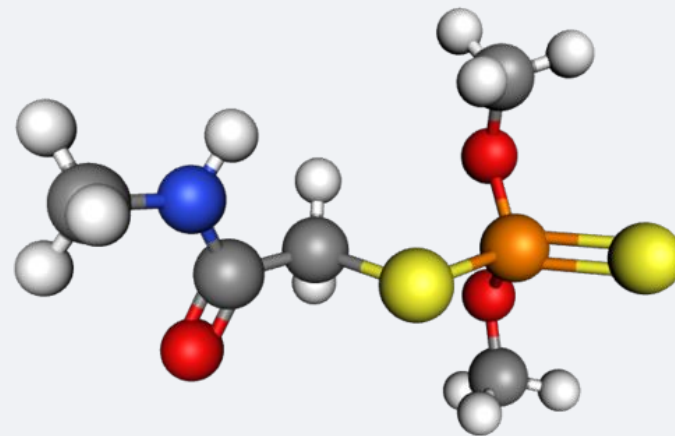
Pains / Challenges

Prediction of molecular properties using AI is entirely data-driven: the AI is fed with high volumes of examples of molecule and analogs of the previously synthesized molecules. The quality of the input data is paramount in designing successful drugs.


SOLUTION

Training of an algorithm to accurately identify and classify a molecule

The algorithm needs high precision data to identify chemical patterns in input molecule data in order to be able to regroup and classify them accordingly. Our annotators were trained to identify the key components of molecules at first to train the model on basic classification and then moved on to specific components in order to classify them with more precision.



RESULTS

5  **Designed medicines approved**

11  **Clinical trials underway**

70% **Reduction of drug development costs**

Medical Image Analysis

Context

The accurate interpretation of X-Rays is critical in efficient diagnosis and treatment. Yet, even among skilled radiologists, interpretation errors go up to 15%.

Idea

To reduce the incidence of interpretation errors, researchers use and train AI as a clinical decision support tool. The diagnosis model identify organs, detects anomalies and classifies the images according to the existence or not of a pathology.

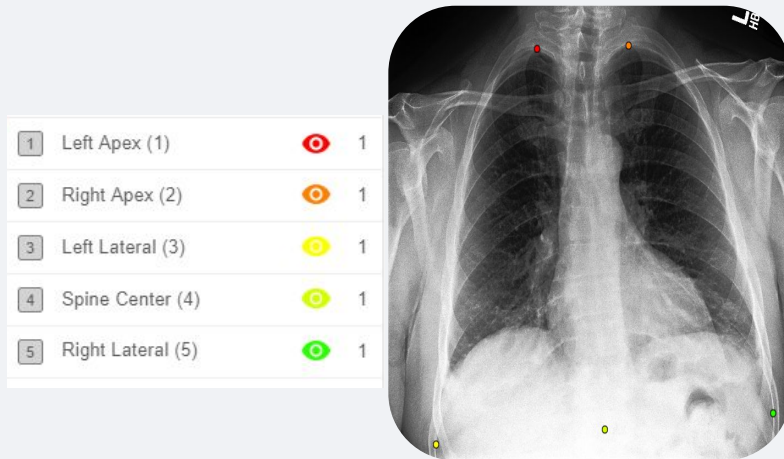
Pains / Challenges

To ensure that the diagnosis system effectively supports medical decisions in real clinical workflows, the fidelity of the AI technique is crucial: since the deep learning model is data-driven, biases in the training datasets lead to skewed results.

SOLUTION

Training a deep learning algorithm to reliably diagnose lung pathologies

The researchers and our team worked closely to combine knowledge-driven and data-driven approaches to provide a carefully curated dataset. From the outset, our annotators integrated in the data labeling process context and confounding variables, which enable the AI to make explainable diagnosis.



RESULTS



The detection algorithm was able to successfully detect lung anomalies and identify complex lesions, like cardiomegaly, dextrocardia, lung masses...

87%

Diagnostic accuracy for deep learning algorithm, compared with humans' at 86%

93%

Specificity for determination of a pathology

Augmented Reality Surgery

Context

SURGAR leads the integration of AR into surgical workflows, enhancing precision in laparoscopic surgery. Their software suite superimposes virtual data onto live operations, aiming to reduce errors, intervention times, and hospital stays.

Idea

SmartOne collaborates with SURGAR, providing precise data annotation for AI models. This partnership improves recognition of critical structures, preserving them during surgeries, and aiding in the meticulous execution of surgical plans.

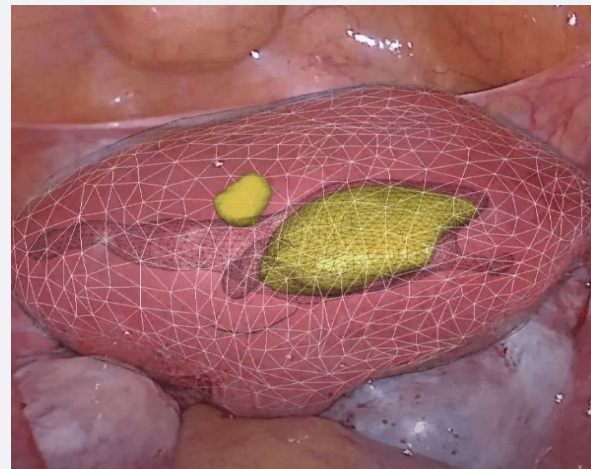
Pains / Challenges

Traditional laparoscopic surgeries face limitations in surgeons' field of view and accuracy. SURGAR addresses these challenges by enabling precise identification of anatomical structures with AR overlays, optimizing surgical outcomes.

SOLUTION

Augmented Reality for Laparoscopic Surgery

The successful application of AR in surgery by SURGAR and SmartOne sets new standards in the field, driving AI and machine learning innovation in healthcare. SmartOne's commitment to data excellence supports the next frontier of AI advancements.



RESULTS

20x

Increase in surgical precision

50%

Reduction in complications rate

40%

Improvement in patient safety and outcomes

Content Moderation

Context

Harmful online content leading to real-life violence is becoming a rampant issue. Human moderators struggle to regulate the ever-growing amount of toxic content and overtime become desensitized to it.

Idea

Engineers want to scale content moderation with a more complex content moderation model that goes beyond making decisions based on standardized procedures like keywords triggers, and understand ambiguity and harmful references.

Pains / Challenges

The model struggled to understand sarcasm, irony, symbolism... Analyzing data with context is key to detect toxicity in a seemingly innocuous content and prevent reinforcing biases by overly flagging keywords.

SOLUTION

Natural Language Processing for a content moderation model

The initial dataset had been fine-tuned by our human moderators to improve the model's ability to be contextually aware, to detect toxicity subtly hidden in trendy expressions, purposely misspelled hateful words (stupid, idiot...), punctuations in the words (stupid, lies...)... and make explainable classifications in a large amount of non-standardized cases.



RESULTS

80% Categorization accuracy

+4.5M Content removed in a year

+3M Accounts actioned in a year

Facial Expression Analysis

Context

Psychological triggers in marketing are scientifically proven to create more loyalty and drive more interactions, sales, word-of-mouth... than logical sales arguments. This is why brands increasingly invest in understanding customers' emotions.

Idea

Marketers use an automatic facial expression analysis (AEFA) system to understand how an advertisement is perceived, if the advertisement catches their customers' attention. The insights improve marketing operations.

Pains / Challenges

There are only a handful of basic emotional facial expressions datasets available to train the model, whereas emotion is conveyed in more than 10,000 distinct expressions. Human-in-the-loop is key for training efficiently the AEFA algorithm.

SOLUTION

Sentiment analysis for an AEFA system optimization

Our work consisted in fine-tuning a model through a more complex video database of customers reactions to advertisements. Our annotators first labeled simple elements in the videos: face recognition, posture, face visibility, room brightness... Then they classified levels of attentiveness based on macro and micro facial expressions, which is the tedious part as there is no Ground Truth in micro-expression labels, even for experts.



RESULTS

89.5%

Average recognition rate



Better insights to improve advertisement effectiveness for target groups



Conclusion that emotions are as expected a valid predictor of advertisement liking and purchase intention



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Skin Analysis

Context

There are more than 25,000 skincare products available to choose from. With so many choices, customers are most likely to use the wrong treatment for their skin condition. Serious negative outcomes, like legal actions, are not uncommon.

Idea

To simplify the choice of products and help customers get the right skincare for their needs and condition, a cosmetic company provides an AI that gives skin health metrics and product recommendations, based on a customer's selfie.

Pains / Challenges

The initial model was trained with a standardized dataset: pictures taken in a good light, high definition, same angles... For the system to work in real-life conditions, the model needs to be trained with a large dataset of variable quality selfies.

SOLUTION

Large-scale dermatology dataset for a skin analysis application

For each skin health metric, our team annotated hundreds of thousands of selfies taken under various conditions. Close collaboration with dermatologists and researchers is paramount, because some characteristics are almost imperceptible or very similar to other signs. The first step was to identify skin problems with points, then qualify these points according to the skin condition, label and validate them.



RESULTS

90%

Diagnostic accuracy

84%

Pooled specificity for skin analysis

330%

Increase in online store dwell time

Makeup Try-on

Context

To attract the new generation of buyers who grew connected online, and to address the intense competition in the cosmetic industry, beauty brands have been implementing augmented reality in their strategy for a few years.

Idea

A beauty brand wants to enhance its customer experience, with a try-on application that overlays the makeup on the customer face under different angles, and gives a true-to-life makeover so consumers can be confident that they are buying the right product (shade, finish..)

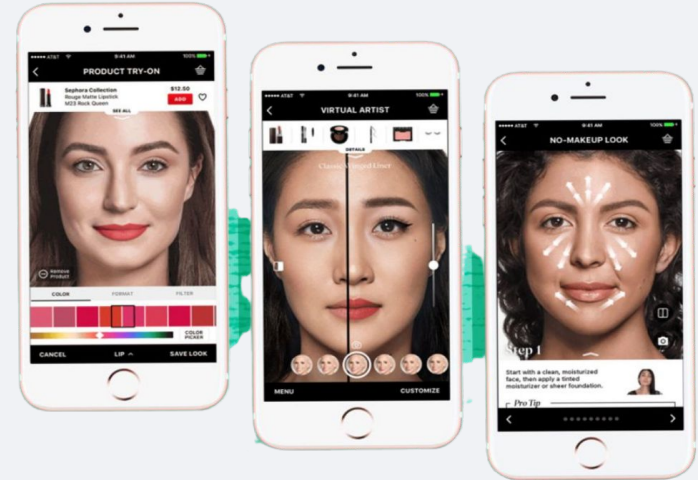
Pains / Challenges

The initial application glitched when the user recorded a video, especially on small parts of the face: eyes, mouth corners.., and couldn't properly render complexion accuracy and finishes. It needed face tracking training to smoothly interact with a moving face.

SOLUTION

Face tracking algorithm and 3D rendering training

We worked on a combination of two algorithms to give a realistic finish to the AR makeup. For the first algorithm, the goal was to enable the model to smoothly track the facial landmarks. For the 3D rendering algorithm, it was to create a transparent mask on which the makeup is applied. Our team drew different key points corresponding to the contours of specific facial areas from different angles.



RESULTS

+100

Facial points detected in real time

+60%

Increase in sales

x7

Increase in brand engagement

Night Time Face Recognition

Context

Face detection efficiency is essential for surveillance systems. Near infrared light cameras and thermal cameras are the most commonly adopted for nighttime vision, but they are still expensive to use on a regular basis.

Idea

Researchers designed a nighttime face detection model to enhance conventional surveillance systems capabilities. The AI determines a person's identity from the pupils and renders a recognizable face from an image captured in a night environment.

Pains / Challenges

In nighttime environments, the image quality varies according to the subject's distance and the environment (outdoor, indoor, low light, noise, blur, occlusion...). The AI can't match these images with the standardized visible faces database.

SOLUTION

Dataset for night time face detection algorithm training

To get a larger training dataset, our team processed thousands of videos taken under challenging conditions: different distances, brightness differences, low image resolution, non-frontal head poses... The goal was to enable efficient eye detection and face tracking. Using key points, our annotators reconstructed elements of the face: pupil, mouth and then the whole face.



RESULTS

99%

True verification rate at 1% false acceptance rate

98.83%

Recall

98.17%

Precision

Supply Chain Management

Context

With a loss in revenue of up to 32% as a result of out-of-shelf products, replenishment and inventory visibility are major pain points for retailers. Supermarket chains are investing in innovative technologies to enhance shelf-stocking efficiency.

Idea

The supermarket chain strives to optimize shelf replenishment and reduce spoilage. Engineers developed an automated system to check product availability in real-time, forecast out of stock and achieve higher inventory reduction.

Pains / Challenges

The synthetic computer vision model relies on a large amount of well prepared data as input. The tremendous amount of the cameras generated images was too large for the client internal team to deal with.

SOLUTION

Shelf-stocking monitoring model training

To enable real-time shelf monitoring and stock forecast, the first step was to identify connexion between the product shelves from supermarket images. Our annotators then marked box areas with missing items and the neighbor products. Finally, with zoomed images of void areas, our team records products id and description.



RESULTS

5%

Maximum forecasting error rate

80%

Out-of-shelf decrease

30%

Increase in sales

AI Logistic Control

Context

To harness the potential of today's supply chain as a strategic asset, logistics managers need to make more data-driven decisions supported by valuable information such as location, storage and delivery status, fuel expenditure...

Idea

The supply chain company provides a data-driven software that aims to optimize operational processes by maximizing storage information accuracy, cutting downtime and controlling fuel expenses.

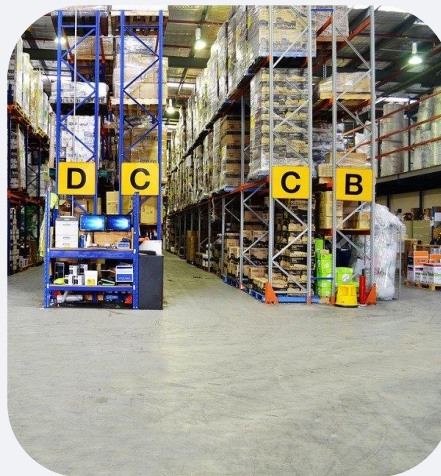
Pains / Challenges

Supplier valuable data is scattered across paper forms, spreadsheets, SRM and ERP systems... The lack of centralized access and simplified view of the supply chain slows down operations and increase their cost.

SOLUTION

Large-scale training data for logistics automation

Our mission was to train the model to deduce ways to improve the supply chain and production, by analyzing reports and operations statements forms. To do this, our teams identified and extracted key information related to the values and categories of the statements in order to track a product in the different steps of the storage and use process.



Add Another

Name of Material: (required)

Code: (required)

Storage Beginning of Month: (required)

Receipts: (required)

INPUT Runs to Stills and/or Blends: (required)

Products Manufactured: (required)

Fuel Used: (required)

Deliveries: (required)

Storage End of Month: (required)

RESULTS

20% Improvement on service levels and On-Time-In-Full deliveries

30% Cost decrease from shipping costs

50% Cost decrease from inventory levels and holding costs

Autonomous Truck & Yard Management Automation

Context

Yard operations inefficiencies such as gate congestion, waiting time, inaccurate informations, hazardous conditions for manual tasks... adversely impact the entire supply chain: downtime, product spoilage, stock-out and credibility issues for retailers...

Idea

Our client automates distribution yard operations to facilitate safe, cost effective, highly efficient and zero-emission yards operations. The automated system includes management software, autonomous electric trucks and site infrastructure.

Pains / Challenges

Trailer status monitoring was one of the repetitive and hazardous manual tasks. To efficiently tackle the issue, human intelligence was an essential component of our client's computer vision model!

SOLUTION

High-quality labeled data for computer vision

The goal was to achieve highly efficient visual perception to provide real-time and accurate informations for the automated yard management system. Our collaborative approach with the client involved model training, by labeling the text data on trailers, as well as assessment of the trailers status.



RESULTS



The model was efficient enough to enable the client to open the first test facility dedicated to fully automated distribution yard systems



Recognized in Gartner "Cool Vendors in Supply Chain Execution Technologies" report

\$7.9bn

The estimated size of yard management system market through 2027, according to a Research and Markets report

Smart Plantation Management

Context

Plantations of trees like palm oil or bananas are spread over several hectares, and they are still largely manually monitored. Inventory, information gathering that would allow for better planning and yield maximizing is extremely labor intensive.

Idea

To gain time, rapidly process and analyze data collected from drones, engineers developed a cloud AI-based application that can count trees, geo-locate them and detect gaps.

Pains / Challenges

The creation of the dataset relies on manual sampling and is often time consuming, especially when covering large areas. The data processing to generate accurate and valuable information is very time consuming and complex.

SOLUTION

Risk scoring model training

Our team enriched maps by annotating trees and points of interests. Each target tree was identified with bounding boxes. Particular cases detected are submitted and reviewed with the client, then added to the database.



RESULTS

5%

Yields increase

2.3%

Detection mean absolute percentage error

99.3%

F-score

Crop Management

Context

Invasive weeds cost agricultural production about \$137 billion annually, in the US only. Disease losses are another major factor affecting agricultural productivity. Successful crop management is critical to producers.

Idea

Our client developed an AI-based system to detect and categorize weeds and diseases. The technology is aimed to achieve intelligent weed control, precise agrochemical spraying and yield estimation.

Pains / Challenges

The similarity between weeds and crops makes it difficult for the algorithm to distinguish them. Complex interference factors in the natural environment, changing light, occlusion, clustering are other significant obstacles to accurate detection.

SOLUTION

Weed and disease detection

The goal was to enrich the client database with identified references and non reference crops. Our team classified the different types of crops with a polygon tool. Weed, diseased and dehydrated crops were then labeled non reference crops as per the client's database.



RESULTS

90%

Reduction of herbicide usage

97,55%

Overall recognition accuracy

95,85%

Precision

Car Damage Assessment

Context

McKinsey estimates to up to \$1.1 trillion the potential annual value of revenue generated by AI for insurance players. The applications are as numerous as the insurance categories. This complexity remains a challenge for insurance companies

Idea

The insurance company leverages AI to shorten the processing time and perform less error-prone vehicles inspection tasks. The model enables the team to seamlessly process the increasingly large generated data from customers.

Pains / Challenges

Quality and sufficient training data is critical for the model's ability to generate more accurate and actionable insights over time. Inaccurate estimates may lead to significant revenue losses for the insurer.

SOLUTION

Car damage recognition model training

The model is trained to recognize vehicle parts and types of collision impacts, based on the customer's inspection guideline. The algorithm accuracy increases overtime, as our annotators continuously evaluate its categorizations. Each damage is labeled, then classified by type, and assigned a confidence index.



RESULTS

30%

Increased efficiency

90%

Accurate damage recognition rate

90%

Correct repair costs estimate

Hazard Impact Evaluation

Context

Natural disasters has increased by 74.5 percent in the last 20 years, compared to the precedent period. They result in \$133 billion in global economic losses per year. It is critical to assess the situation quickly after a natural hazard for damage assessment.

Idea

The insurance company harnesses AI to process and analyze satellite images in a short period of time. The model enables a faster and more accurate financial impact estimation of the natural disaster for the end customers.

Pains / Challenges

High-quality data are the foundation for seamless damage detection and seamless claims processing. Another issue is the lack of dataset available for various scenarios, especially for infrequent natural disasters, such as volcanic eruptions or landslides.

SOLUTION

Damage mapping model training

We worked on before and after disaster satellite images to train the model to identify and classify damages in various scenarios. The first step is to geotag targets (houses, infrastructures...) before the disaster impact. On the next image, the model must assess whether the target is still present, if the images are relevant and finally assess the extent of the damage.



RESULTS

94% Target detection accuracy

92% Damage mapping accuracy

20% Saved in claims costs, by improved estimation accuracy

Why SmartOne

Global Impact with a People-First Approach

We're not just a company; we're a global force empowering organizations from diverse sectors. From budding startups to industry titans, research bodies to educational institutions, our reach is vast and our impact profound.

Meticulous Precision in Data Annotation

Over the past decade, our dedication has been unwavering. We've meticulously annotated over 1.5 billion data points across text, images, videos, audios, and more. Our expertise aids the world's leading AI teams in refining their data for enhanced computer vision, sophisticated natural language models, advanced chatbots, and beyond.

Unmatched Expertise & Commitment

At SmartOne, our people are our pride. Every member of our team is a full-time employee, bringing unparalleled expertise and dedication to each project. This commitment reflects in our industry-leading low turnover rates and our stringent policy of no part-time students or crowdsourcing involvement.

Uncompromised Quality & Security

Data security, quality, and privacy stand at the core of our operations. We guarantee the highest quality with a minimum 98% accuracy rate. Our transparent pricing model ensures no hidden costs, upholding our ethos of clarity and integrity.



THANK YOU

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