To improve operations at manufacturing and production sites

AI-Enhanced Work Analysis

User-trainable Behavior Analysis System

VP-Motion

What is AI behavior analysis system 'VP-Motion'?

VP-Motion is AI-powered human behavior analysis software made in Japan, that learns, and subsequently automatically detects, human movements. Through machine learning, the integrated AI acquires the ability to recognize a wide range of movement and behavioral patterns and enhance automatic detection capabilities.
Utilizing this product allows the user real-time detection of a diverse range of abnormal behaviors, from mistakes or accidents at the workplace—such as falls or people collapsing—to suspicious activities, and more. Through the use of VP-Motion, you establish an autonomous surveillance system, eliminating the need for continuous human monitoring.

Work Time Reduction
Productivity Improvement
Technical transfer

Product Benefits

Cutting-edge AI Pose Estimation: High accuracy & Faster Inference

Compared to conventional methods that demand extensive video data and annotations for creating training data, "VP-Motion" with its large-scale pre-trained model achieves high accuracy with only a small amount of extra data, significantly reducing the training time.

Product Features

- Capable of detecting actions even when the camera angle is different from the training data.
- Short Training Time
- Minimal Training Data
- Real-Time Swift Analysis
- Multi-User Training Data Creation
- Video-Based Training Data Creation Tool and Training System
- Simultaneous Monitoring with up to 8 Cameras※1

※1 Depending on specifications of PC

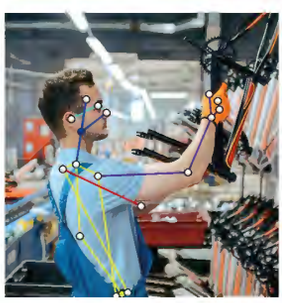
Introducing New Feature! 'Image-based Analysis Mode'

Image-based analysis takes far more factors into consideration, such as background, objects and colors. It is most effective when there is a lack of pronounced movement, such as the detailed movements of a hand holding a tool, or the correct way to handle different tools, because this mode of detection can also detect factors outside of the human body, such as tools held in the hand or devices that are being worked on.

- Behaviors classified differently based on the items held by individuals
- Behaviors classified according to the type of work object, such as the equipment or product being used.
- Behaviors involving only the arms and upper body, such as work on a workbench



Discover 'Upper-body Mode'

Previously, accurately tracking skeletons where only the upper body was showing, proved challenging. The upper-body mode now enables accurate tracking, even when confronted with such footage.

Use Case

VP-Motion can be used in a wide variety of settings, and the user can freely customize the software to target specific behaviors. Here are just some examples of the multitude of possible fields and scenarios in which VP-Motion could be an asset.

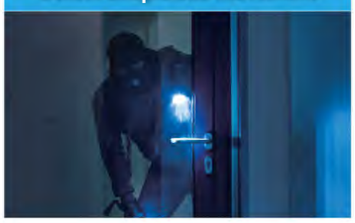
Detect Routine Tasks

Workflow Improvement in Manufacturing

Detect Collapsing People

Sudden Onset Illness Detection

Detect Suspicious Movement



Crime Prevention and Security

Three Included Programs

VP-Motion includes three applications: VP-Motion Annotator to create training data; VP-Motion Trainer to train your AI model; VP-Motion Monitor to apply the model to prerecorded and live camera footage.

With Training Data Creation Tool

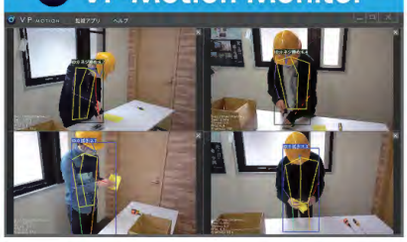
VP-Motion Annotator

Training data creation & output tool

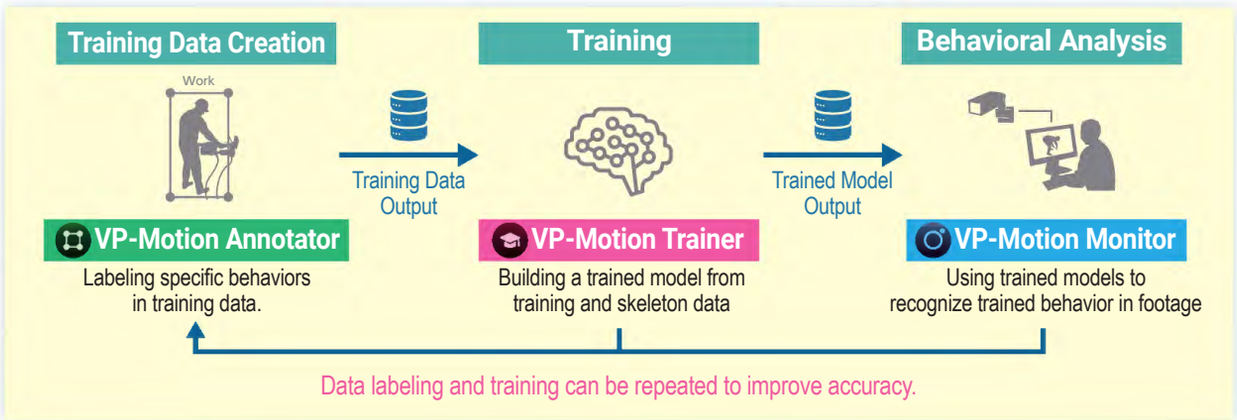
VP-Motion Trainer

Model training tool

VP-Motion Monitor



Action recognition surveillance tool



Implement the system and start saving right away

As an example of what can be achieved by implementing VP-Motion, we have compared how many manhours and how much money it would take to classify the content of video data of 100 employees doing their work, either manually or through VP-Motion. Below you will find an estimation of how much you would save.

Reduction of manhours

If classification of 100 workers is done manually

8 hrs of footage = 1 hr of work
1 hour x 100 people

= 100 hours

If classification is done by AI through VP-Motion

8 hrs of footage = 0.1 hr of work
0.1 hour x 100 people

= 10 hours

Save roughly 90% in terms of manhours

Reduction of costs

Personnel cost of 1 manual classifier

Hourly wage of $31,25*
x 160 hours x 12 months

= $60,000

*based on salary of equivalent job in California

No personnel cost when using VP-Motion

All-in-One package

= $8,690

Save roughly 86% in terms of costs

More info at https://www.next-system.com/en/vp-motion