

## [Case Study] Beprol's 'AI Coach'



"With the Suite, we can get clear insights into our machine learning data sets, and can collaborate seamlessly with fellow engineers, PMs, and data labelers."

Steffen Truse, Beprol's AI Engineer

Beprol is a start-up that provides the clubs with **Bepro Analytics**, a real-time football game analysis system. **Bepro Analytics** is equipped with AI that recognizes and tracks both players and balls in real-time, and analyzes the game situations. Beprol is not only the 'AI coach' that provides data-based game strategy optimization, but also is aiming to lead the talent acquisition market by connecting worldwide databases.

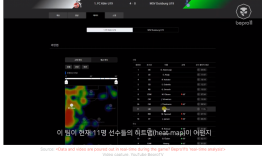
Beprol, which entered the German market in 2017, already has over 700 clubs in 12 countries as their clients, and they have accumulated more than 44,000 player data. Last year, Beprol played a significant role in Korea winning the runner-up in the U-20 World Cup, and is currently receiving vast attention from the European Big-5 Leagues. It guarantees real-time analysis only after 10 minutes after the start of the game.



beprol logo

### The need for additional data learning to improve AI performance

Beprol's vision is to democratize game videos and data. It wishes to extend the AI football analysis culture not only to professional leagues but also to amateur leagues and public games. The goal is to provide both teams and individuals the analysis services.



Source: <Data and video are poured out in real-time during the game? Beprol's real-time analysis>

Video capture, YouTube BeprolTV

However, it was difficult to apply the already existing service right away. Perfectly analyzing different types of stadiums was particularly challenging due to several factors, such as the presence of spectators, turf conditions, uniform types. To solve this problem, Beprol had to additionally train different types of stadium data into its algorithm. Data labeling refers to processing image or video data into a form that can be taught to artificial intelligence. In order to build a dataset for further training, you need to collect new data suitable for the purpose and label those data.

Beprol decided to use an external professional service rather than collecting and processing data internally. This enables engineers to solely focus on their jobs while collecting data in a short amount of time; however, it can also bring difficulties in communication and monitoring. To resolve this issue, Beprol decided to employ Superb AI Suite to cooperate with an external data processing company.



beprol, Suite and labeling company

### Superb AI Suite that addresses engineers' monitoring needs

#### Issue Tracking function to reduce communication cost and increase accuracy

It is agreed among the AI engineers that the most time-consuming step in the AI development process is the 'data processing' step. Not only does it take a tremendous amount of time to label trainable data, but also to inspect and correct those data requires much effort. The biggest problem is that the communication cost is high, and the accuracy is at risk due to the lack of communication tools between stakeholders.



Superb AI Suite's Issue Tracking function  
(This image is a sample for better understanding.)

To solve this problem, Beprol actively utilized the Issue Tracking function. Issue Tracking is a function that allows various stakeholders involved in the data construction process to immediately leave comments and discuss the issues. This reduced the communication cost and created an efficient communication system regarding labeling and inspection issues. Without this function, it would have been difficult to communicate between clients and labeling agencies regarding image data issues.

#### A more accurate development schedule was possible due to real-time status checking.

The next significant feature was the progress status feature that allows you not only to check labels by status(submitted, in progress, skipped), but also track productivity by users. Due to the nature of the cloud-based Suite, engineers at Beprol Company were able to access the details in real-time, allowing them to easily plan and prepare for the future development schedule.



Example of Analytics tab in Superb AI Suite

### Beprol and Superb AI dream of democratizing artificial intelligence in their respective fields.

Beprol has improved the analytics performance of **Bepro Analytics** by using the data processed with Superb AI Suite. The real-time analysis system has been improved to the extent that it can process both professional leagues and amateur leagues.

Beprol's vision to 'democratize AI sports analysis' is coming to life with their instalments of cameras in 114 stadiums including Korean middle and high school fields, making both professional clubs and the public access to their game videos and data analyses available.

Superb AI is also making efforts to 'democratize the development of artificial intelligence.' Setting MLOps as the goal, we are making advancements in our features that are essential for AI development, such as Superb Auto Labeling™ and Model Assisted Labeling.

What is MLOps? → MLOps is what will come after DevOps (Coming Soon)

What is Model Assisted Labeling? (Coming Soon)

Beprol, which received the Global Pro League's recognition, plans to expand its service to other various sports. We are looking forward to seeing Beprol on the front line of global sports.



Source: <Introducing the most advanced video tracking technology of Beprol>

Video capture, YouTube BeprolTV

"We've been using the Suite platform in our office to create and manage training data for our Computer Vision models. Suite has truly provided us with a clear insight into our machine learning datasets and also seamless collaboration amongst our fellow engineers, PMs and data labelers. In Data Management is one of the most critical components for those of us in the machine learning development space and the Suite has made sure we stay on course in this regard." (Steffen Truse, AI Developer at Beprol)

### About Superb AI

Superb AI is an end-to-end training data platform that automates data preparation at scale and makes building and iterating on datasets quick, systematic, and repeatable. Launched in 2018 by data scientists, academics, and ML engineers, Superb AI is reinventing how teams of all sizes label, manage, curate, and deliver training data. Fueled by decades of experience and academic research in computer vision and deep learning, including 25+ publications, 7,300+ citations, and 100+ patents, Superb AI empowers companies at all stages to build and deploy computer vision applications faster than ever before. For more information or to get started for free, [go to superb-ai.com](https://superb-ai.com).