6MN
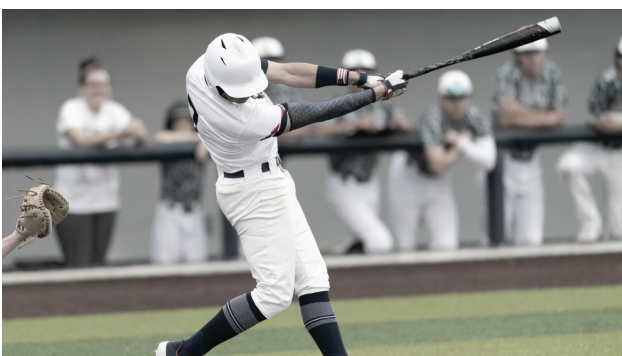## FRAMES ANNOTATED

IMPROVE PLAYER PERFORMANCE

One of Major League Baseball's go-to motion capture vendors, Kinatrax relies on iMerit to annotate their motion capture data so their algorithms generate intelligent, game-changing pitching insights.

THE CHALLENGE

To optimize the performance of their pitchers, Major League Baseball teams employ KinaTrax's motion capture technology to record every aspect of a pitcher's motion. These recordings are then intimately assessed to reduce injury risk, inform strategy, and improve player performance. After gathering terabytes of motion capture data from twelve unique angles, KinaTrax needed a partner who could annotate every frame to the level of precision required for a machine learning algorithm to perform.

> **"**
>
> *We had plenty of great data to work with, but couldn't annotate it ourselves. I decided that we needed a partner who could align our annotation needs with our long-term strategies."*
>
> Steven Cadavid
> President, KinaTrax

Successful annotation meant Kinatrax could create 3D player models that could be analyzed from every angle. After speaking briefly with iMerit, KinaTrax moved quickly to begin work on this critical opportunity.

THE SOLUTION

Once iMerit understood KinaTrax's requirements and key business objectives, iMerit's annotation experts leveraged a custom end-to-end workflow designed for KinaTrax's needs. iMerit annotation

teams examined the motion capture footage and extracted still images across all twelve viewing angles that could be used to build a 3D model. After extracting millions of individual motion capture frames, keypoints were applied to each joint of the pitcher's body.

Upon connecting these keypoints, a 3D model of the pitcher in motion could be generated and analyzed endlessly, allowing KinaTrax to train its system to analyze the movements of pitchers. With these datasets now primed for production, KinaTrax's algorithm could reliably generate insights around each pitcher's motion, performance, and playstyle, resulting in an irreplaceable trove of insights for MLB teams across the country.

> "
> *iMerit's data annotation services are fundamental to our work at KinaTrax, enabling us to build accurate models for hundreds of MLB pitchers and turn these models into actionable insights. We look forward to working with iMerit for seasons to come!*
>
> Steven Cadavid
> President, KinaTrax

THE RESULT

iMerit teams created accurate 3D models for over 300 MLB pitchers across 60,000 pitches and 6,000,000 frames. These models are used as the foundation for ongoing in-game analysis by KinaTrax, and can even be used by MLB teams in real-time to inform strategies and tactics mid-game.

Today, KinaTrax is working with iMerit to improve batting performance using the workflow pioneered by iMerit during the pitching engagement, which has empowered KinaTrax to expand their business by creating partnerships with batting facilities. KinaTrax's studies continue focusing on better understanding baseball, batting, pitching, and injury risk, and with iMerit's annotation services KinaTrax is continuing to make breakthroughs.

BOTTOM LINE IMPACT

6,000,000	300+	60,000+
Frames Annotated	3D Models of MLB Pitchers	Frame-By-Frame Pitching Annotation

About iMerit

iMerit is a full-service data annotation company specializing in artificial intelligence and machine learning. Need a collaborator on your next big project? Speak with an iMerit expert today, and take your project to the next level.

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