AI-FIRST DIGITAL ENGINEERING FOR SPORTS

Player: Robert Lewandowski (Jersey No.: 9)
Object: Football
Action: Throw
Ball Speed: 60 mph

Player: Mats Hummels (Jersey No.: 15)

Player: Tom Brady (Jersey No.: 12)
Object: Football
Action: Throw

Object: Football
1. AI-First Digital Engineering For Sports

1.1 Media Intelligence Applications
a. AI For Sports Archiving
b. Player Tracking & Auto Highlights

1.2 Sports Analytics
a. Player Performance Analytics
b. Player Injury Management

1.3 Smart Stadiums
a. Intelligent Video Analytics

2. Identifying the right AI use case

3. About Quantiphi
Using AI-ML models and intelligent sports analytics solutions are imperative to build a smarter world for sportsmen, advertisers, broadcasters, coaches, scouts, and fans worldwide.

Quantiphi leverages a combination of deep learning, computer vision, and cutting-edge AI to reimagine the major sports disciplines. We use computer vision-powered solutions to collect athletes’ performance data and leverage groundbreaking AI tools to gather insights regarding the audience’s sentiment.

Quantiphi’s machine learning (ML) and deep learning (DL) systems process the aforementioned data to create forecast models and assist scouts, coaches, and managers with their decision-making, and help automate numerous complex workflows related to broadcasting and fan experience.

**MEDIA INTELLIGENCE APPLICATIONS**

Media Intelligence for Sports is a combination of AI offerings for content-intensive sports companies & OTT Platforms. They are perfect solutions for content owners who need to search desired sporting moments from their vast archives and automate content operations.

**SPORTS ANALYTICS**

Objectively analyze players and the game using computer vision and deep learning. Our sports analytics solutions enable coaches and scouts to build a competitive edge over their opponents. Here, we combine data-driven insights with sports storytelling to improve fan experiences for sports broadcasters.

**SMART STADIUMS**

Makes stadium and match-day experiences better, more engaging and profitable. Our deep expertise in video analytics and connected IoT enables stadiums to build secure environments, track visitor data, and effectively manage the match-day experience.
MEDIA INTELLIGENCE FOR SPORTS

- AI For Sports Archiving
- Player Tracking & Auto-highlights
AI FOR SPORTS CONTENT ARCHIVING

OVERVIEW

Sporting Leagues worldwide generate an enormous amount of video content in live match footage, post-match coverage, training sessions, videos, and player interviews. Worldwide Global leagues have accumulated thousands of hours of content spanning decades. Searching edit-worthy moments and desired player footage is like finding a needle in a haystack.

AI-assisted sports archiving is necessary for any sports content publisher. Manual video tagging can be replaced with machine learning (ML) driven algorithms. The algorithm automatically analyzes and tags videos in real-time, allowing the users to quickly find what they’re looking for - players, events, desired objects, specific camera angles, and so on.

SOLUTION WORKFLOW

- Media Archives
- Player Detection
- Player Recognition
- Archives made searchable in Media Hub
- Players Integrated to MAM
- Active Learning of AI Workflow

SOLUTION FEATURES

- Intelligent Video Processing Model
- Player Identification
- Hypertagging Engines tuned to the requirement of a particular Sports

BENEFITS AND BUSINESS IMPACT

- Helps them to effectively manage and understand their content archives
- Higher accuracy in tagging for better search and retrieval
- Ability to repurpose existing content, create specific highlight
Global sports fans are divided with their favorite players, teams and even action. Every single match can offer multiple perspectives. Today broadcasters and content publishers need to create personalized content for different fan segments. With timelines getting shorter, the pressure on editorial teams is immense.

Player tracking and auto-highlights is an AI solution to extract information from sports videos instantly. It is the perfect solution for sport content owners who need to unearth players related information from their match footage archives and automate tedious tasks such as creating highlight reels, headshots, and other editorial workflows.

**SOLUTION FEATURES**
- Intelligent Video Processing to assess multiple camera angles
- Pose Estimation
- Action Recognition
- Ball Tracking
- Performance Analysis

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**SOLUTION WORKFLOW**

- Content Archives
- Player Detection
- Player Tracking
- Automated Highlights for OTT & Broadcasters
- Player Jersey Number & Color Identification

**BENEFITS & BUSINESS IMPACT**
- Faster production of game highlights as per editorial requirements
- Better search and retrieval of content across sports footage
- Higher fan engagement due to customized highlights
SPORTS ANALYTICS

- Player Performance Analytics
- Injury Detection & Management
For a long time, sportsmen and coaches have relied on experience, gut feel, and the knack of identifying “intangible” player qualities to excel in their jobs. The cut-throat competition in the sports industry and the ever-decreasing margins of errors have made it essential to modernize the approach towards training and supplementing it with evidence-based decision-making.

Player Performance Analytics provides a complete picture of your athletes’ performance in the training ground or matches.

Powered by Computer Vision, the AI-powered solution uses the recorded footage and metadata to analyze each player’s performance through intuitive dashboards and use this analysis to devise strategies.

**OVERVIEW**

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**SOLUTION FEATURES**

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**BENEFITS & BUSINESS IMPACT**

- Generating player performance metrics which helps in evaluating a player
- Provide technical analysis to improve their skills
- Provide tactical analysis to improve their match play
Quantiphi’s solution aims to make contact sport safer by leveraging player tracking and collision detection. The solution analyzes footage from cameras placed at strategic spots on the field and uses collision detection and player tracking to identify the degree of impact.

Metrics like individual game time, total distance covered, collision counts and head impacts enables us to predict possible health concerns and manage players' fitness.

Efficient tracking of injuries and history of exposure helps players and teams to analyze the causes of such incidents and subsequently mitigate them.
SMART STADIUMS

- Intelligent Video Analytics
  - Smart Surveillance
  - Smart Operations
  - Compliance Measurement
Stadiums across the globe deploy conventional camera-based monitoring systems for surveillance and operations. Despite the presence of cameras, visitor experience and surveillance improvements for stadiums have been traditionally reactive.

Intelligent Video Analytics makes match-day experiences better, engaging and profitable. Through video analytics and connected IoT we build secure environments, track visitor data, and improve day-to-day operations.

Smart surveillance - Detect unsafe behavior, intruders and suspicious activities.

Smart operations - Manage assets, inventory and improve day-to-day operations.

Compliance measurement - Social distance compliance and customer tracking

OVERVIEW

SOLUTION FEATURES

- Intrusion Detection
- Queue Analytics
- Crowd Density Analysis
- PPE & Social Distancing Measurement
- Parking Management
- Suspect and attribute search
- Riot detection

BENEFITS & BUSINESS IMPACT

- Safe and secure premises
- Better customer experience
- Improvement in operational efficiency
- Reduction in manual overhead
- Reduced response time in case of an incident
- Enhanced capability/reduction in turnaround time for post-incident analysis
Finding activities within your business that are expensive and repetitive, yet cannot be reduced to simple heuristics.

What are the tasks where inference/decision can be made in a matter of seconds?

Understand the tasks in which AI is nearing or breaching human levels of performance.

Finding activities within your business that are expensive and repetitive, yet cannot be reduced to simple heuristics.
Named a leader in the Forrester New Wave™: Computer Vision Consultancies

Leader in IDC MarketScape: Worldwide AI IT Services

Rated as a Leading Major Player in the IDC MarketScape

Google Cloud Partner of the Year Awards - Data Analytics

Quantiphi’s AI-powered Video Deduplication wins at IABM BaM Awards® 2021
Quantiphi is an award-winning AI-first digital engineering company driven by the desire to solve transformational problems at the heart of business. Quantiphi solves the toughest and complex business problems by combining deep industry experience, disciplined cloud and data engineering practices, and cutting-edge artificial intelligence research to achieve quantifiable business impact at unprecedented speed. We are passionate about our customers and obsessed with problem-solving to make products smarter, customer experiences frictionless, processes autonomous and businesses safer by detecting risks, threats and anomalies. For more on Quantiphi’s capabilities, visit www.quantiphi.com