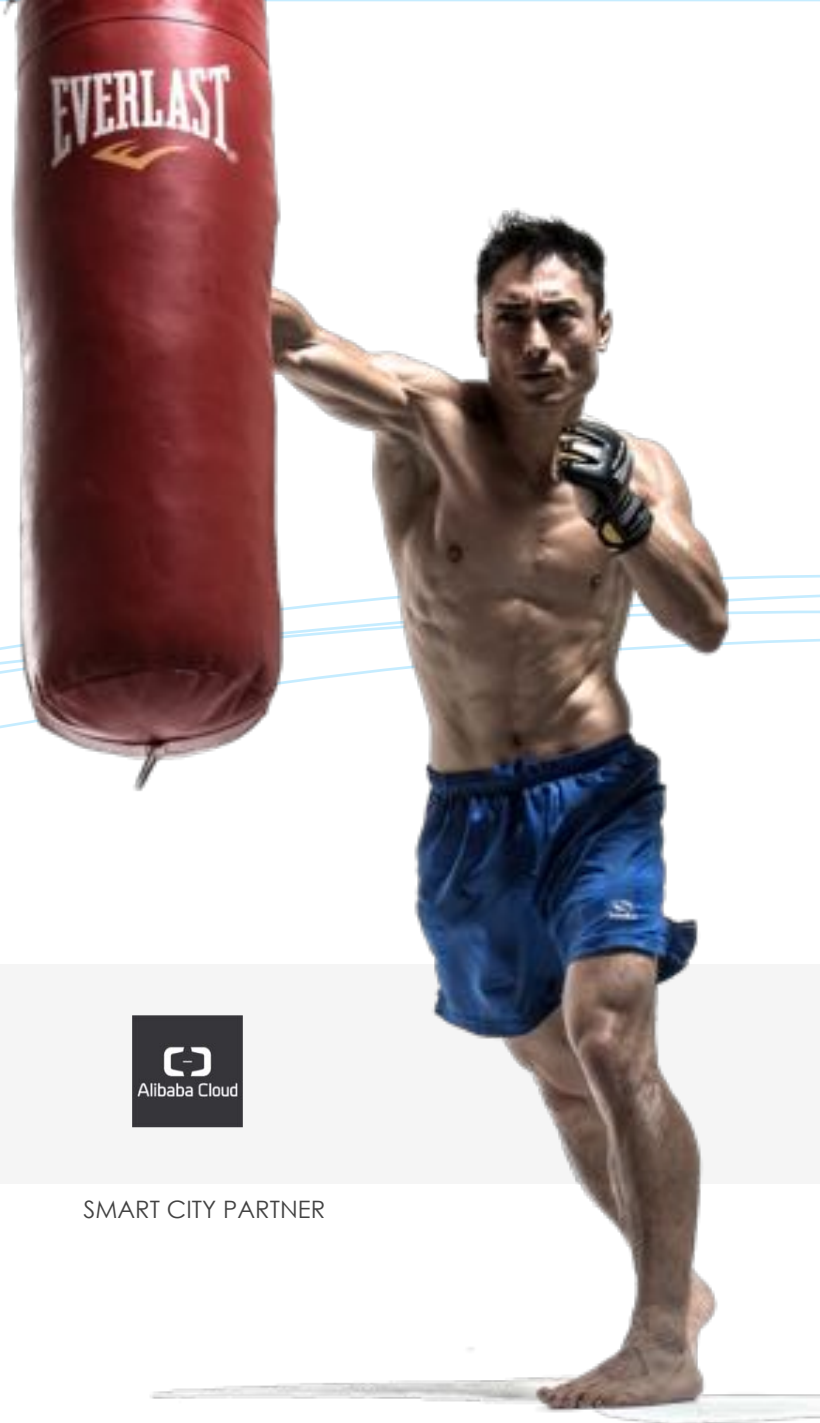
miro

Human Body AI

Company Profile, Nov 2018



中国加速 CHINACCELERATOR	數碼港 Cyberport	NVIDIA	amazon web services / aws activate	Alibaba Cloud
BATCH 14	INCUBATEE	INCUBATEE	INCUBATEE	SMART CITY PARTNER

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miro

We analyze
bodies in motion
at scale

We use:

AI + Computer Vision + Proprietary Data

to build Human Body AI

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Founders

Proven team with a history of execution
Engineering-Lead w/ Enterprise Experience

Taylor - CEO

Product & Sales

COMPUTER VISION | PRODUCT MGMT | CLIENT MGMT

TEAM LEAD | BIZ DEV | SALES | CODE

Before miro

Global VP, Head of Digital - Asia at TMS
Global Digital Lead at McDonald's

BA – KALAMAZOO, ECONOMICS/BUSINESS

Jamie - CTO

Data Science & Dev

MACHINE LEARNING | DATA SCIENCE | CLOUD ARCH | CODE

DEV LEAD | PROJECT MANAGEMENT | COMPUTER VISION

Before miro

Director, Technology - Asia at TMS
Director, Technology at Notey

BS – UNIV OF MANCHESTER, COMPUTER SCIENCE
PMP – Certified AGILE PM

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Key Team Members

Evan Kroft - Head of Partnerships
Leads media, partnerships & sales

Before MIRO
VP, CRM & Digital at Sonic
Sr. Director, Digital & Data at TMS

MS – Northwestern University
BS – Elmhurst College

Wallace Leung – Head of Delivery
Leads execution, release & integrations

Before MIRO
Sr. Project Manager, Digital at TMS
Digital Producer at Ogilvy

BS – Hong Kong Baptist University

Proven @ Scale

Monopoly CV SDK	**2B+ SCANS**
iWIN Platform	**30MM DAU**
Offers Creation Engine	**US$1B SALES**
McD QR Central	**10B+ TXNS**

This **same team** lead computer vision & mobile innovation for **McDonald's®**

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FACE ANALYSIS
WAS THE BIG STORY IN AI

Face Analysis is a **solved problem.**

$2B+	$1B+	$1B+	$1B+	$1B+		
facebook	amazon	Google	Microsoft	Apple	Face++ 旷视	商汤 sensetime
					$2.5B	$4.5B

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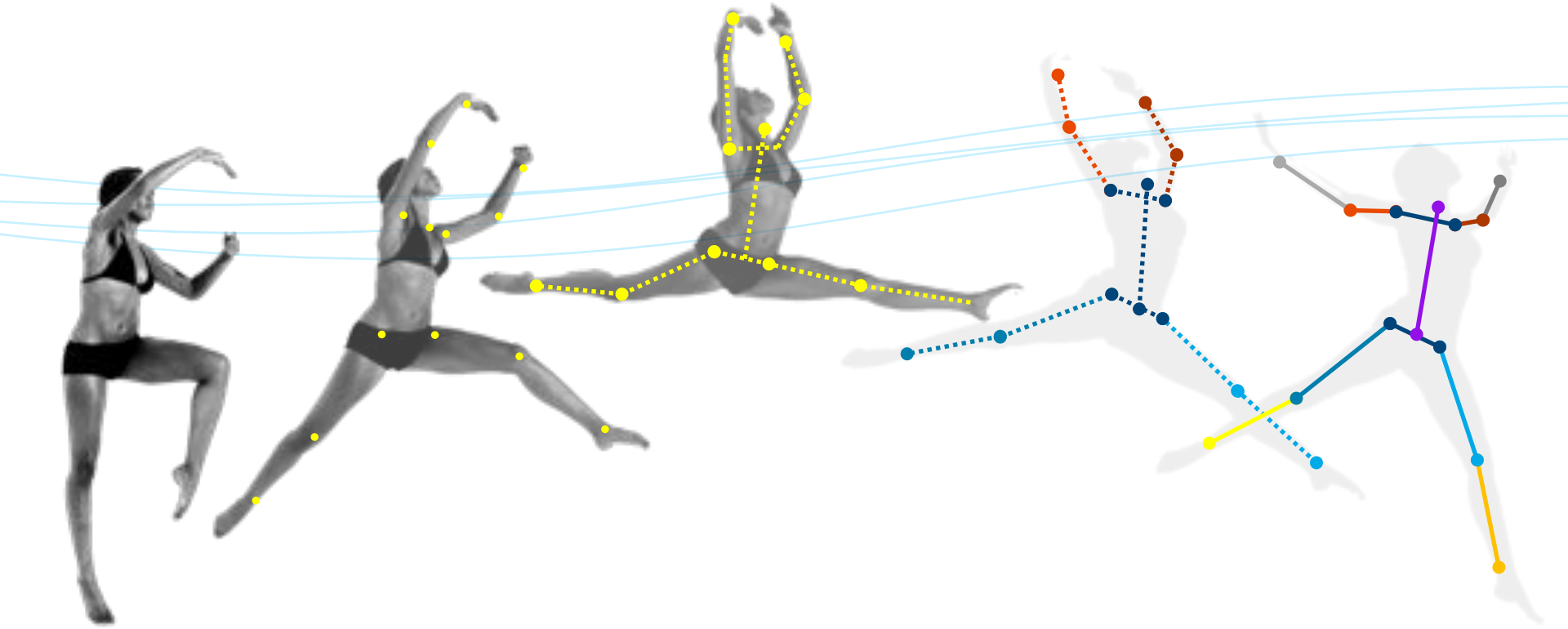
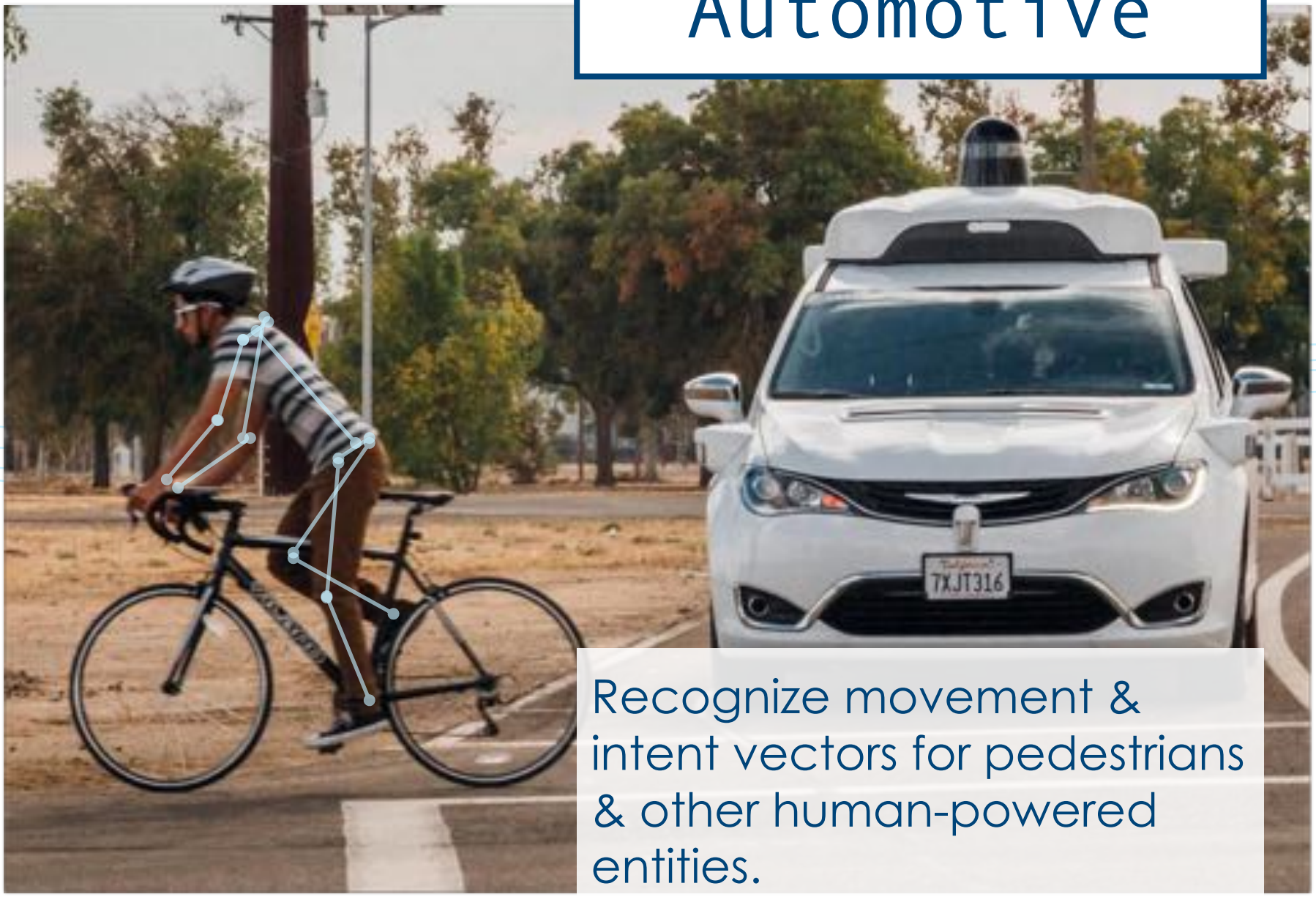
Body Analysis is just getting started.



Wide Applications & Opportunity

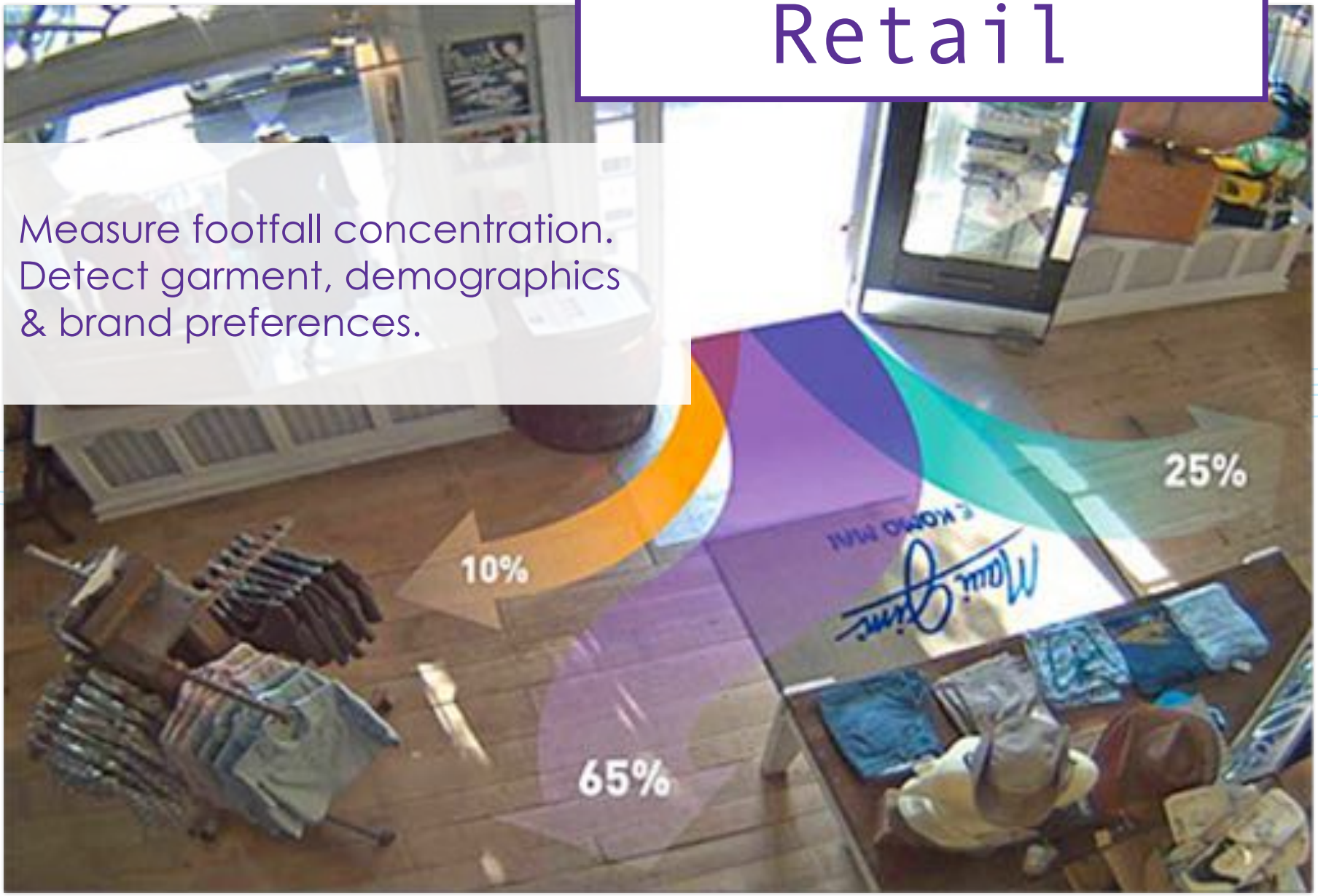
Automotive



Recognize movement & intent vectors for pedestrians & other human-powered entities.

Retail

Measure footfall concentration.
Detect garment, demographics & brand preferences.



Track gestures, movement & perform crowd estimation. Recognize patterns of suspicious or aggressive behavior.

Security

Physical Therapy

Track progress & orthotics efficacy. Perform in-the-field analysis & provide corrective advice.

Data Problem

Training **AI for bodies** is **very difficult** b/c datasets are highly variable.

Clothing Variability

Subject & Size Variability

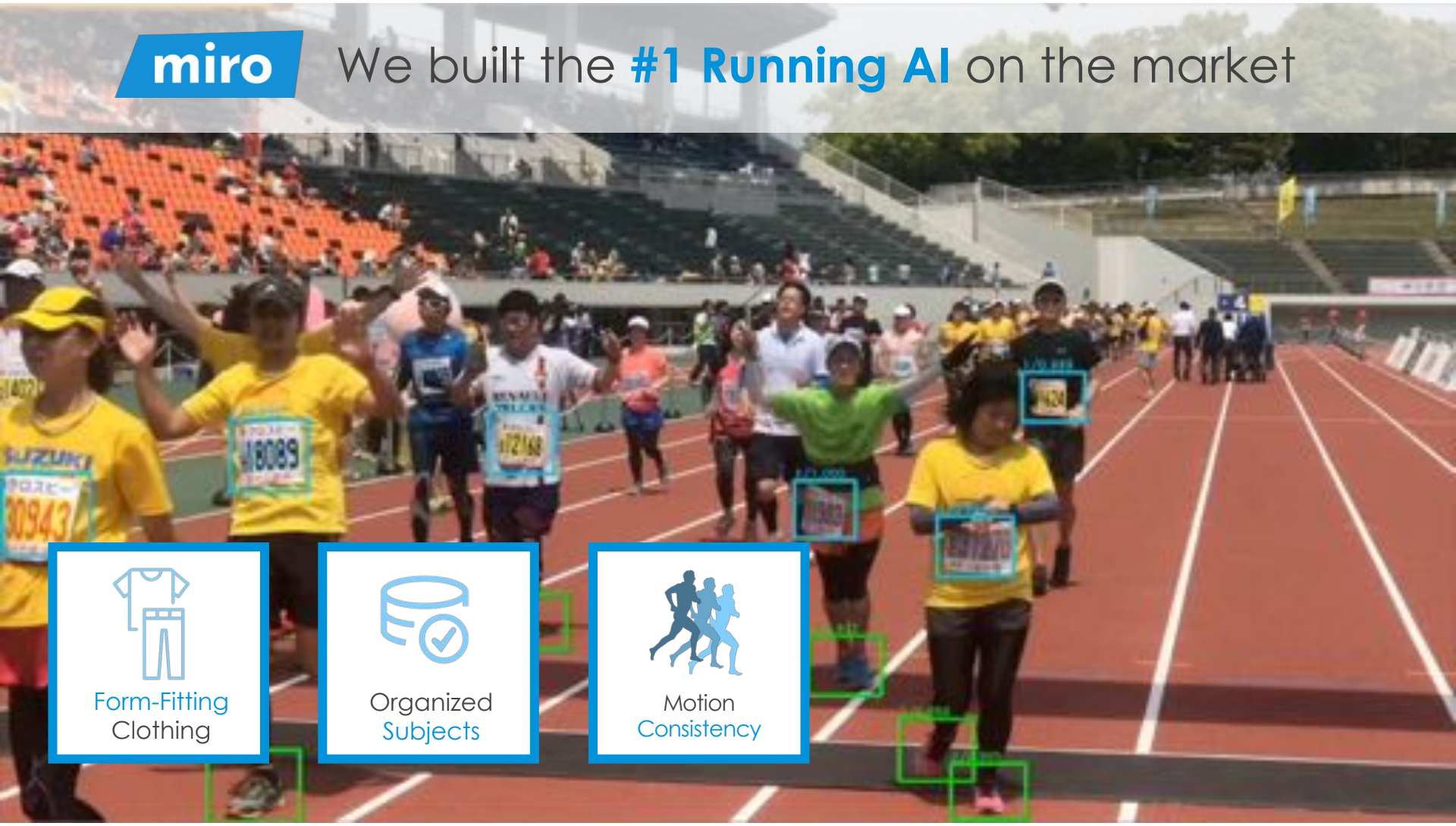
Activity Variability

miro

Our Solution:

Running Event Photos/Video
Marathons/5k/10k & others…

miro We built the **#1 Running AI** on the market



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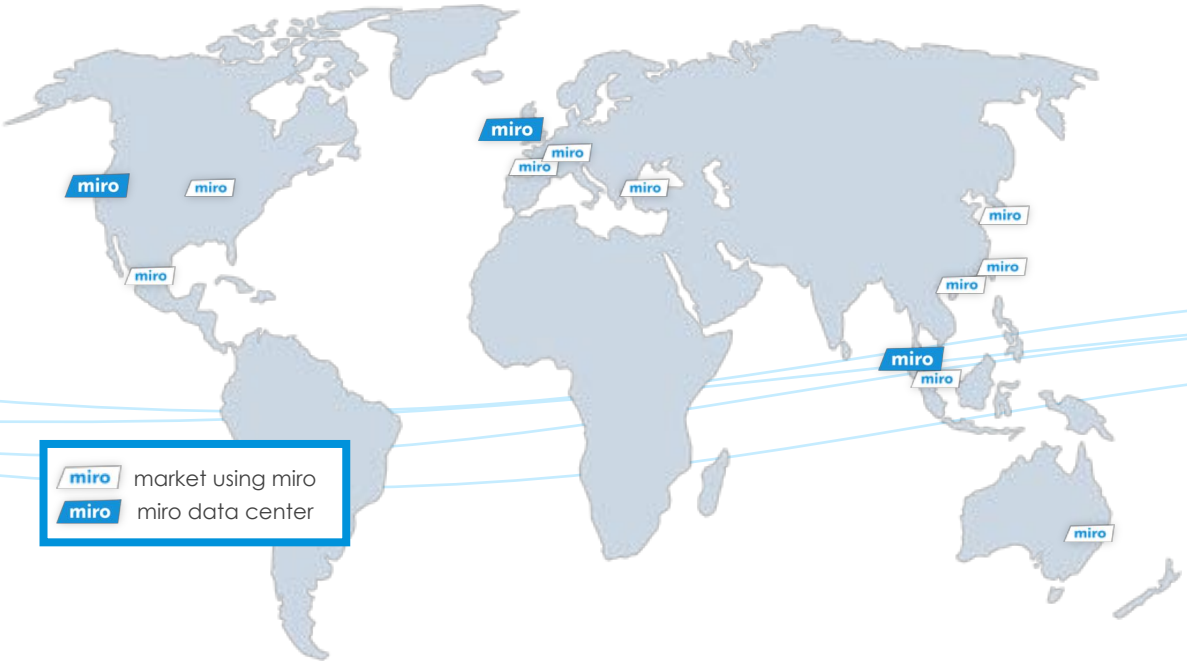
AI for Endurance Sport



2017
65 events

2018
250 events

284%
YOY Growth

Every week, event companies **pay** to use miro 's API to instantly identify athletes in their photos & video.

Unique data advantages ▶

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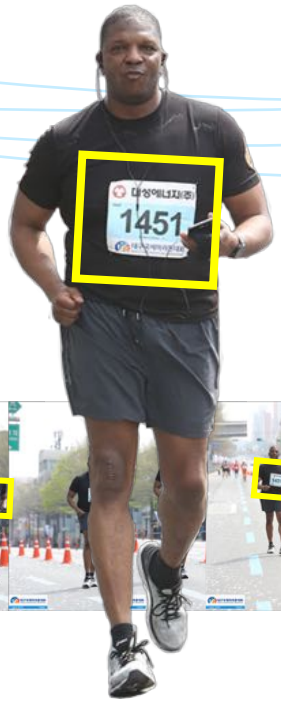
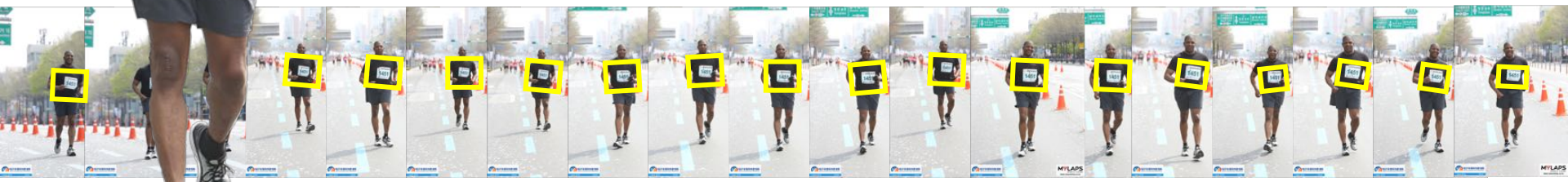
Advantage #1: Auto-Collation

Every Athlete wears a "license plate"



So, we can quickly associate
many angles/poses of the same subject.



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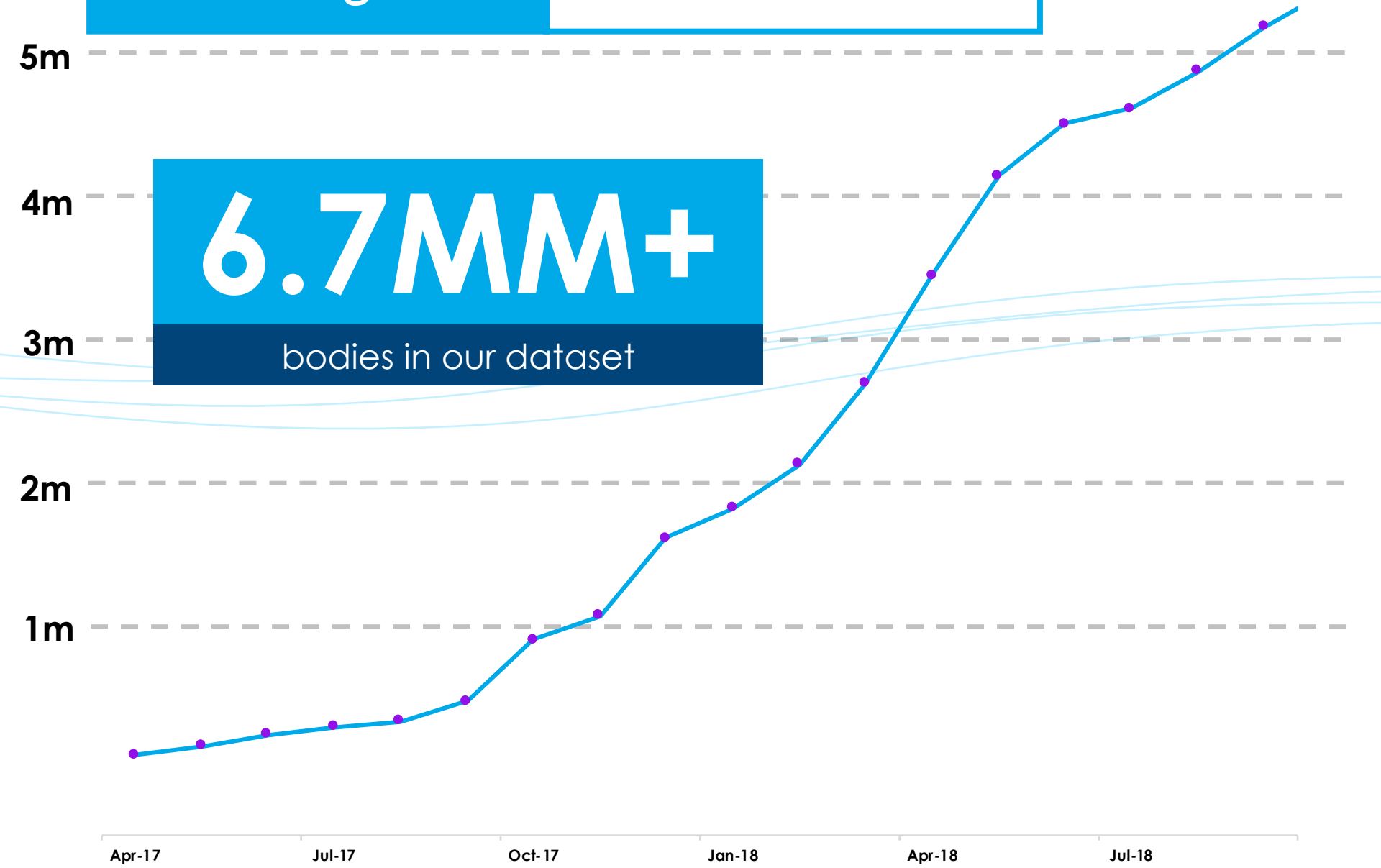
Advantage #2: Dataset Size



Advantage #3: Camera Angle-Agnostic

FIXED-CAMERAS CREATE BAD DATA

Much training data available today is from CCTV, broadcast or other fixed camera-angle setups.
The portability of models trained from data like this is very limited.

RUNNING DATA IS MULTI-ANGLE

FLEXIBLE, PORTABLE AI RESULTS

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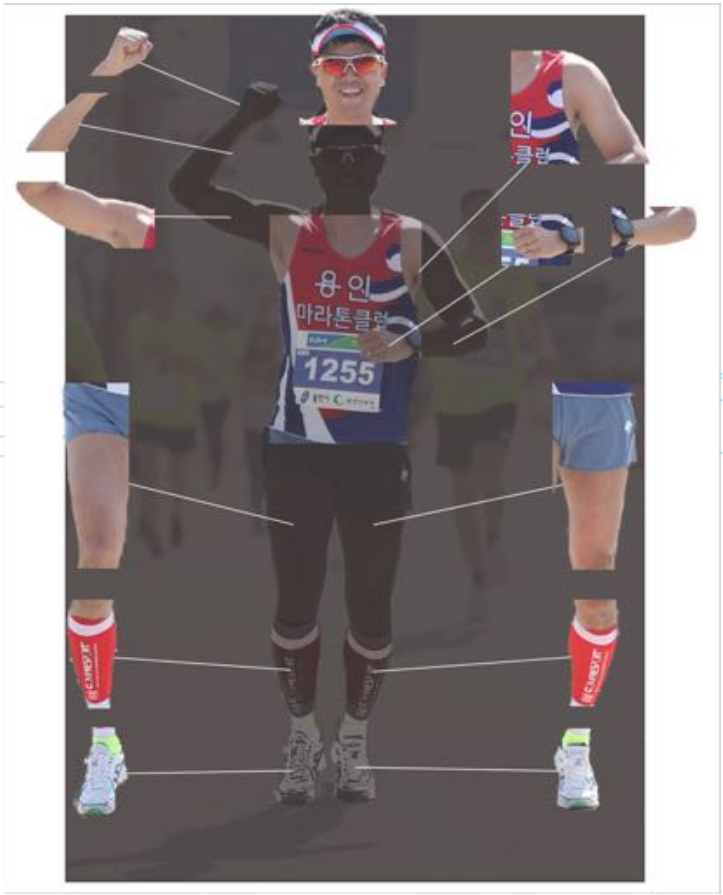
Features Skeletal & Full-Body



Granular Body-Part Analysis

Miro trains models for each of 14 body regions. Each part is analyzed individually & merged back to the root subject/anchor.

Example: The Hand/Wrist

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Features

Garment Brand Recognition

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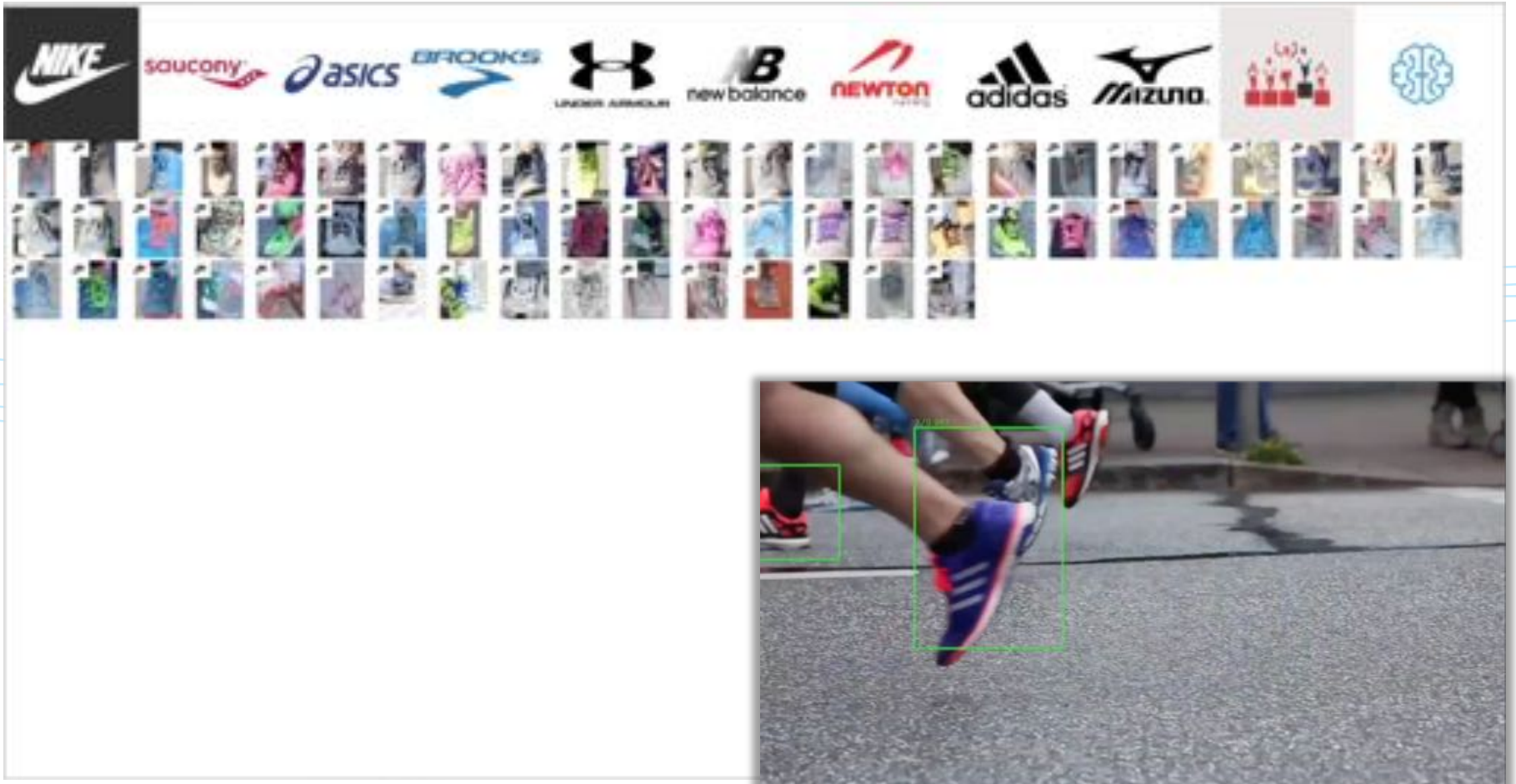
Features

Shoe Brand Recognition



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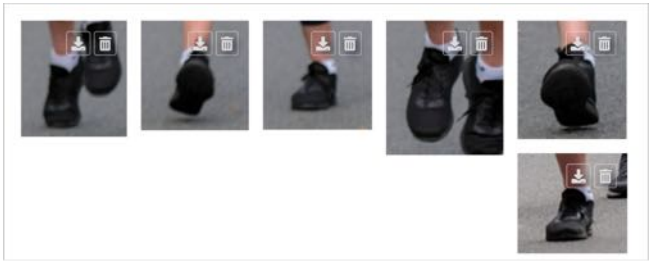
Features Gait & Form Analysis

-74%

-32%



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Features Custom Audiences

We want **ALL RUNNERS** in **OREGON** who are **NOT WEARING HEADPHONES.**

JVC SPORT HEADPHONES

We want **EXPERIENCED RUNNERS** in **KOREA** who **WEAR FITNESS TRACKERS.**

STRAVA™

We want **FEMALES AGED 25-45** in **HONG KONG** who run **WEARING NIKES.**

asics

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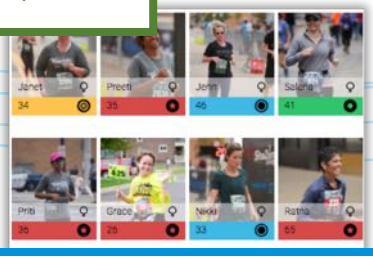
CLIENTS

PIPELINE

3 Near-Term Revenue Streams:

Event companies pay to use our **Athlete ID service** at their events.

US$0.25 Per athlete



We ID Athletes WITHOUT Biometrics

ASIA SPORT CONNECTION EVENTS · ENMOTIVE THE ONE STOP SOURCE · RAD · SOMAD · njuko.com

Launched 04/2017

96% of rev

Brands pay to gain **market research & customer insights** from Miro's AI.

US$0.19 Per athlete

We deliver unparalleled mass consumer data

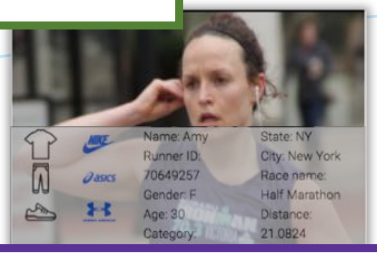
THE NORTH FACE · Columbia · NIKE · HOT Chocolate 15k/5k

Launched 06/2018

4% of rev

Advertisers pay for **data-driven access** to athletes in events using Miro.

CPM/CPA & Negotiated



Build complete 1:1 consumer profiles

amazon · fitbit · JVC · PELOTON · CLASSPASS

Launched 11/2018

New Stream

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Traction & Revenue

2017 Launch

BOOTSTRAPPED

$713,000

REVENUE (USD)

miro

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Now Raising

中国加速 CHINACCELERATOR

Accelerator
Shanghai

SOSV

US$2M @$10M

Lead Investor
SOSV (USA)

February 2019 Close

DEMO DAY: 5 Dec

Team & Sales Expansion

Sales x5 (UK,EU) (SG,JP,HK)

Partnership Team x3 (US,US) (HK)

24 Month Runway

Development Team x7 (HK,US,EU)

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Advisors

Ian Edgar
Advisor – CV & Robotics

COO, CTP & KacePack

Former COO, Insight Robotics

Advisor to several other US-based Computer Vision firms.

Denis Cranstoun
Advisor – Media Sport/Fitness

Director, Palazzo Investments (M&A)

Former NBA & Media Executive with deep sport/fitness network.

Academic All-American Runner

Chris Robb
Advisor – Sport Industry

President, Mass Participation Asia Advisor, ASICS

Sold last company to IRONMAN

Author & Globally-recognized thought Leader in Endurance Sport

John Jasper
Advisor – Technology

President, Connected Vehicles – SIRIUS

Multiple Deep-Tech & SaaS Exits

Advisor to CV firms in drone topography & vehicle tech.

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miro

Human Body AI

Investment: info.miro.io

Careers: miro.io/jobs

Thank you!

Contact: Ben Ross
ben@miro.io
US: +1 248 345 7700
HK: +852 5425 9015

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Note #1: Privacy Compliance

GDPR

Miro is GDPR Compliant

GDPR Use/Storage of Biometrics
Explicit consent for facial scan data creates an opportunity for alternative non-biometric identifiers (body-based).

Miro is BIPA Compliant

US-State Law Use/Storage of Biometrics
Individual US states, lead by Illinois' BIPA, have begun passing legislation similar to GDPR re: use/storage of biometric data.
Current: Illinois, Washington, Texas
Pending: Michigan, New Hampshire, Alaska, Montana,

Expert Representation: Miro is represented & advised by Miller Canfield (Chicago, IL, USA) on data privacy compliance.

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