profileMyRun

Relieving Your Pain. Releasing Your Pleasure.

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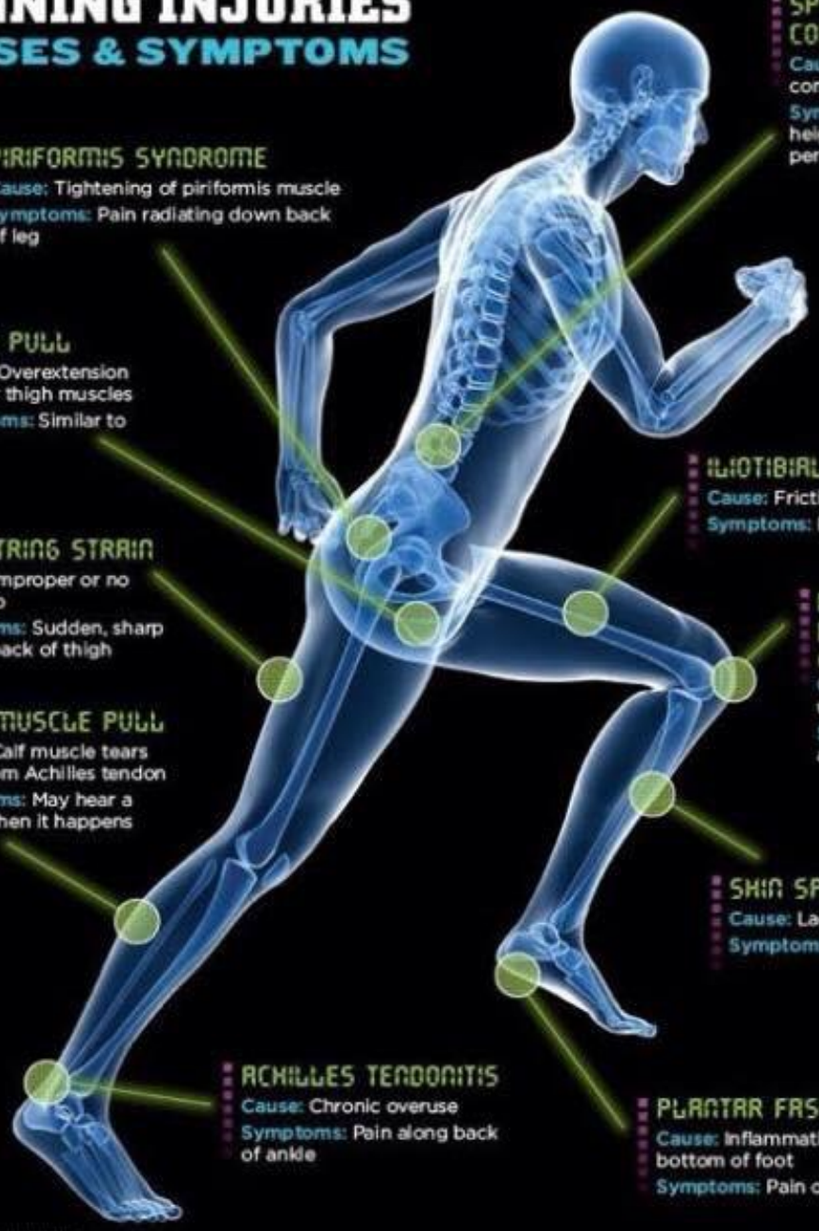
RUNNING INJURIES

36 million people run every year—
40% to 50% experience at least one injury.

RUNNING INJURIES
CAUSES & SYMPTOMS



PIRIFORMIS SYNDROME
Cause: Tightening of piriformis muscle
Symptoms: Pain radiating down back of leg

GROIN PULL
Cause: Overextension of inner thigh muscles
Symptoms: Similar to hernia

HAMSTRING STRAIN
Cause: Improper or no warm-up
Symptoms: Sudden, sharp pain in back of thigh

CALF MUSCLE PULL
Cause: Calf muscle tears away from Achilles tendon
Symptoms: May hear a "pop" when it happens

ACHILLES TENDONITIS
Cause: Chronic overuse
Symptoms: Pain along back of ankle

SPINAL COMPRESSION
Cause: Force of running compresses vertebrae
Symptoms: Temporary height loss; can become permanent

ILIOTIBIAL BAND SYNDROME
Cause: Friction
Symptoms: Pain in hip or knee

PATELLOFEMORAL PAIN SYNDROME
(Runner's Knee)
Cause: Exact cause unknown
Symptoms: Pain under and around knee cap

SHIN SPLINTS
Cause: Lack of conditioning
Symptoms: Pain along shin

PLANTAR FASCIITIS
Cause: Inflammation of ligament along bottom of foot
Symptoms: Pain on bottom of heel

10 WAYS TO AVOID RUNNING INJURIES

1. Warm up with short walk before stretching
2. Stretch before and after running, especially hamstrings
3. Finish run with short walk

WHEN TO SEE A DOCTOR

- Severe pain, swelling, or numbness at injury site
- Unable to put weight on injured area
- Joint abnormality or instability

HOW TO TREAT MINOR RUNNING INJURIES AT HOME

RICE method relieves pain, reduces inflammation

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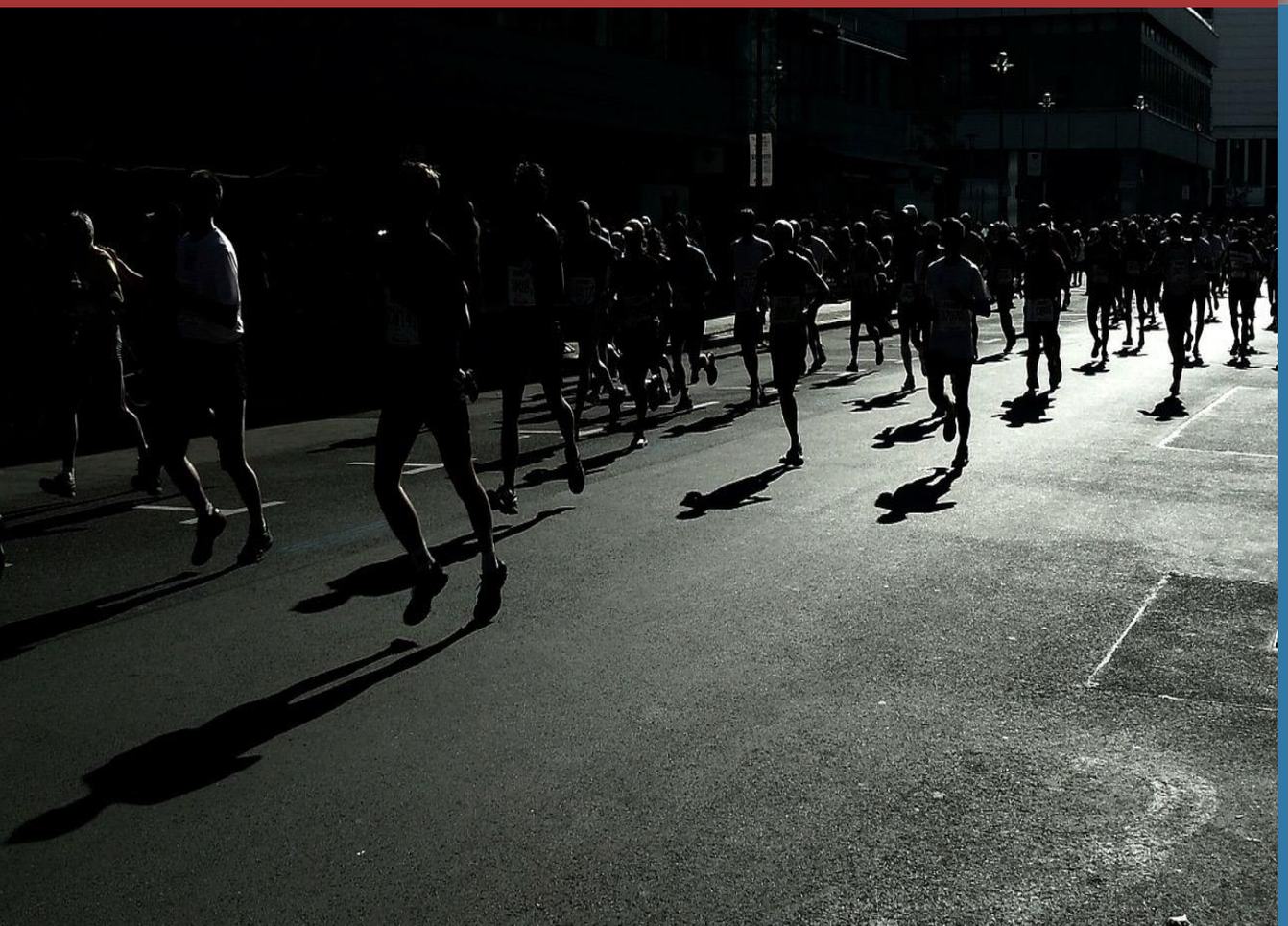
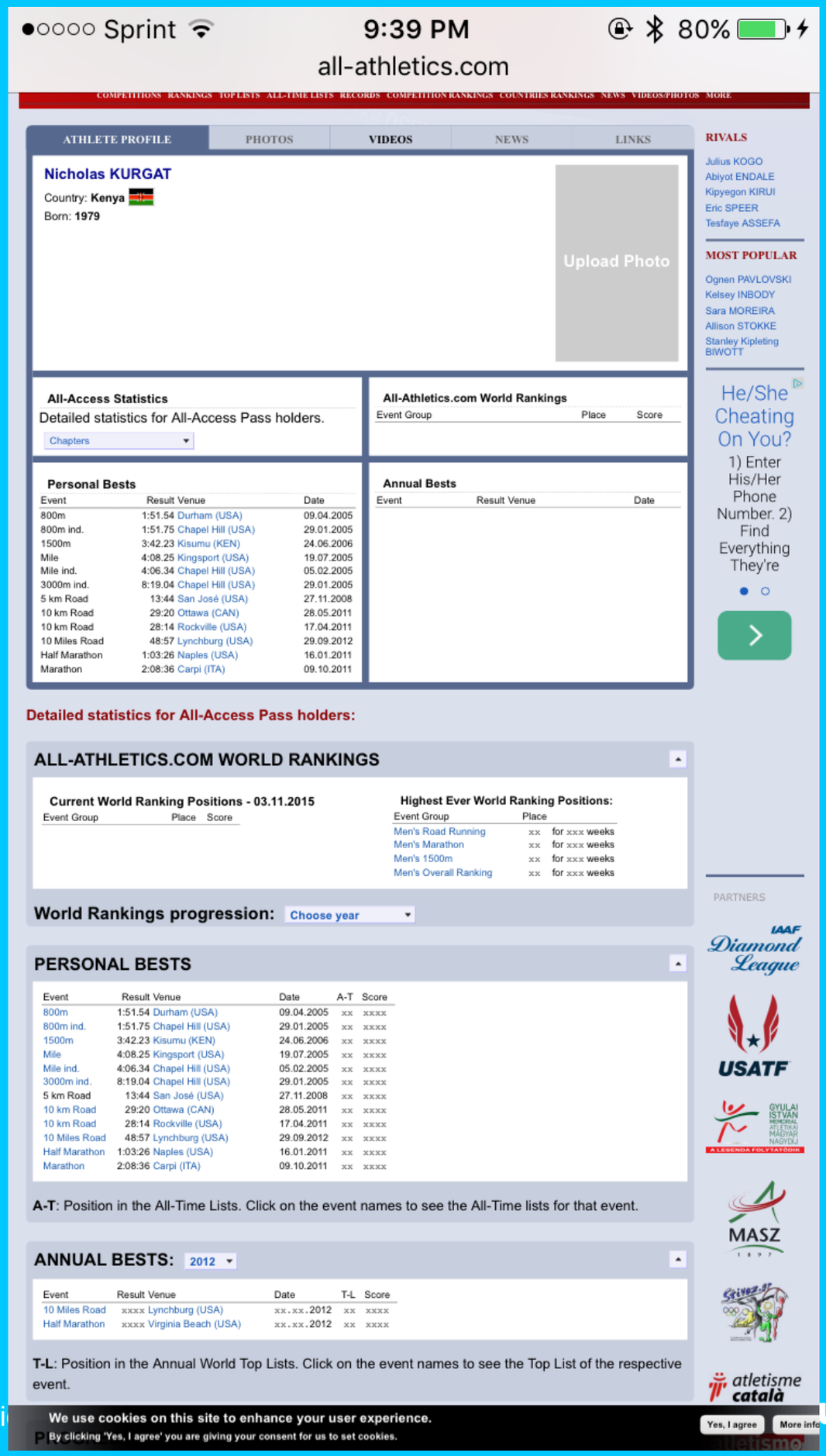
20 Million
Americans Race

35+ Million
Americans Run



Running Hurts

Nearly 8 / 10 runners are
injured throughout the year



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ProfileMyRun: Run the Right Way, Run the Natural Way

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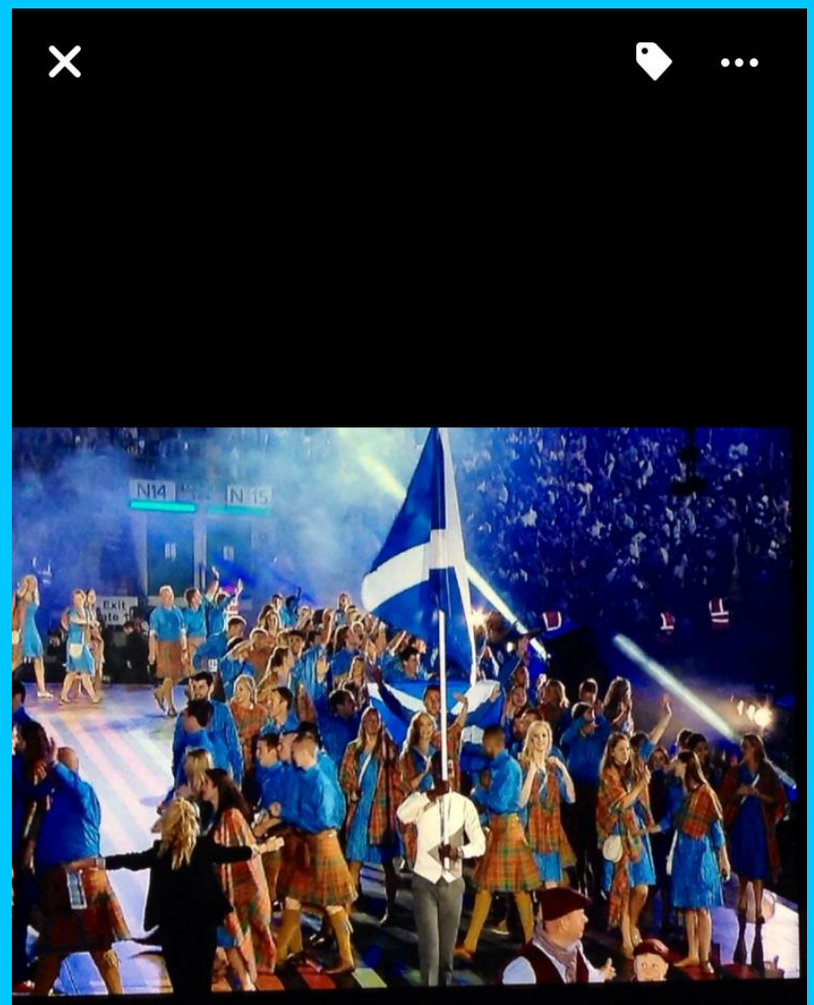
With **Nicholas Kurgat**. See More

16 Likes 12 Comments

Like Comment Share



With **Nicholas Kurgat** and **2 others**. See More

11 Likes 2 Comments

Like Comment Share

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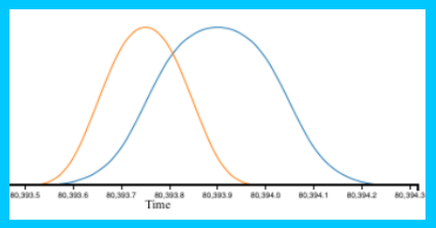
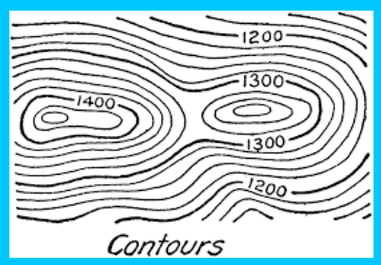
profileA

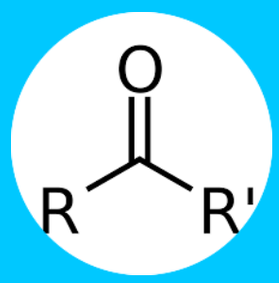
Match

profileB



PAS
Sport Science Analytic Engine





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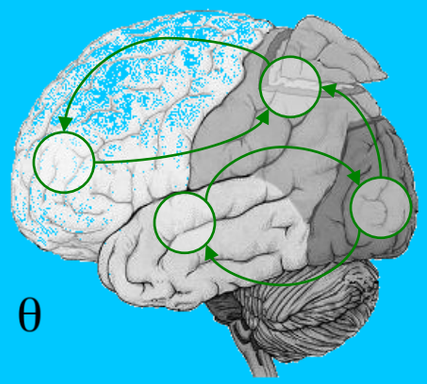
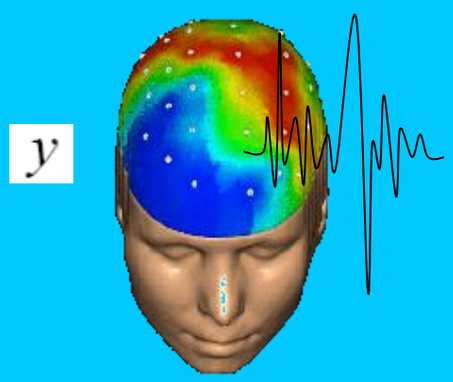
Bayesian paradigm

likelihood, priors and the model evidence



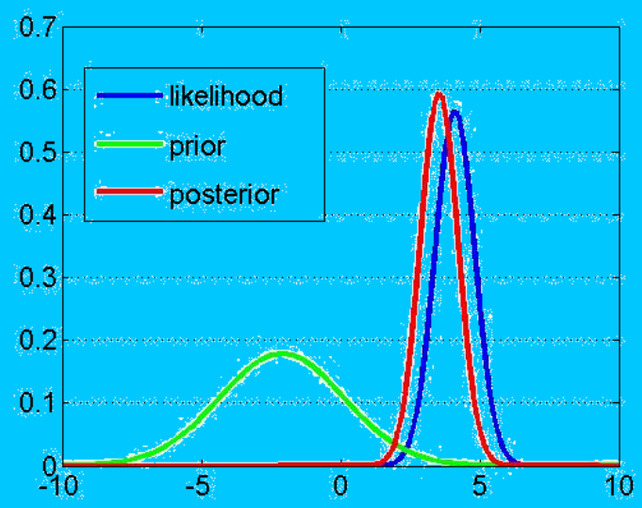
generative model m



Likelihood: $p(y|\theta,m)$

Prior: $p(\theta|m)$

Bayes rule: $$p(\theta|y,m)=\frac{p(y|\theta,m)\,p(\theta|m)}{p(y|m)}$$



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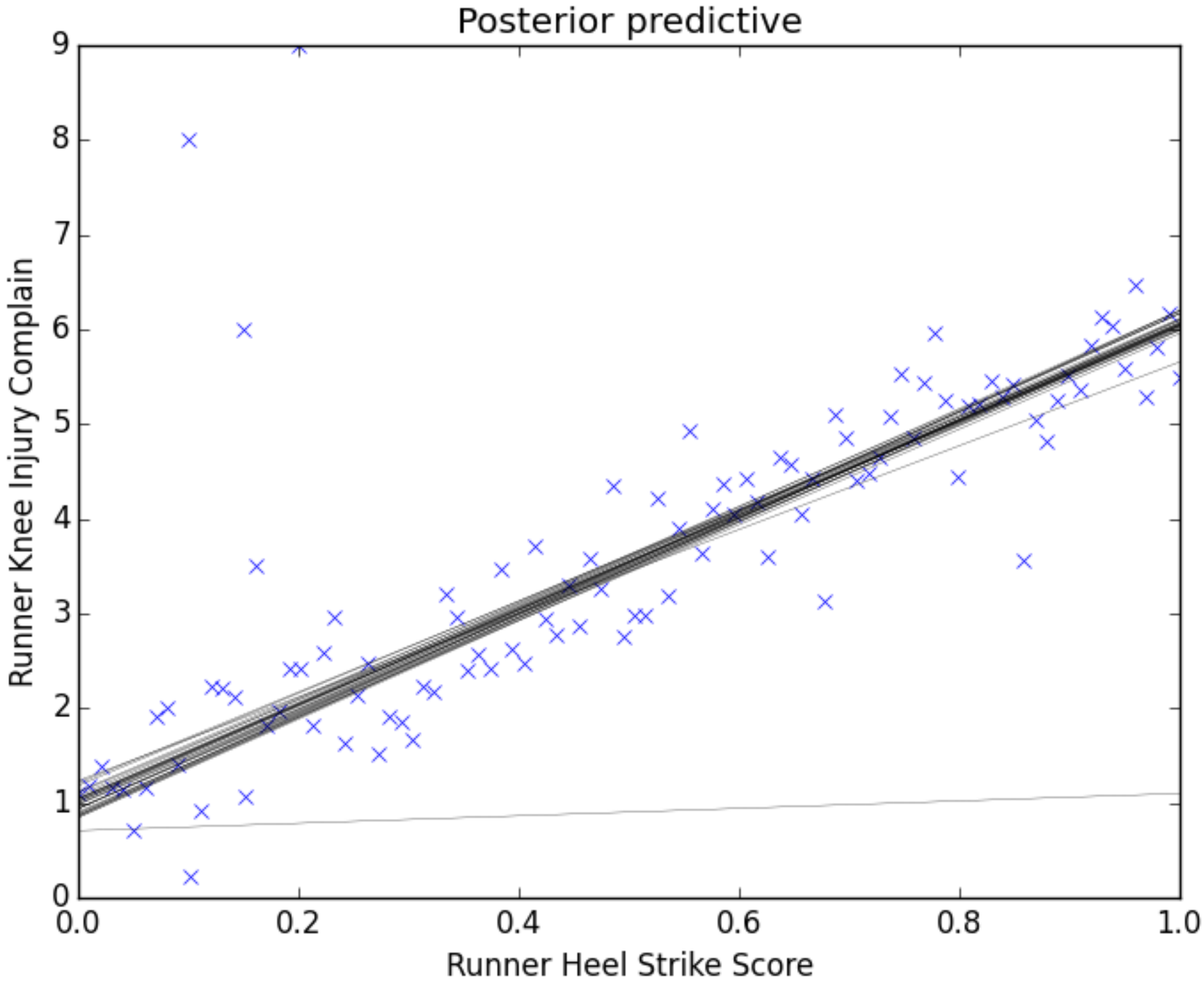

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Blackbox Machine Learning

with scikit-learn

- not good at conveying how answer was provided
- assumptions are typically implicit and opaque

image by Olivier Grisel

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Black Box ML vs. Probabilistic Programming

- Opaque inference
- Constrained models
- Uncertainty ???

- Clear inference
- Extreme flexibility
- Full uncertainty

PAS
Sport Science Analytic Engine

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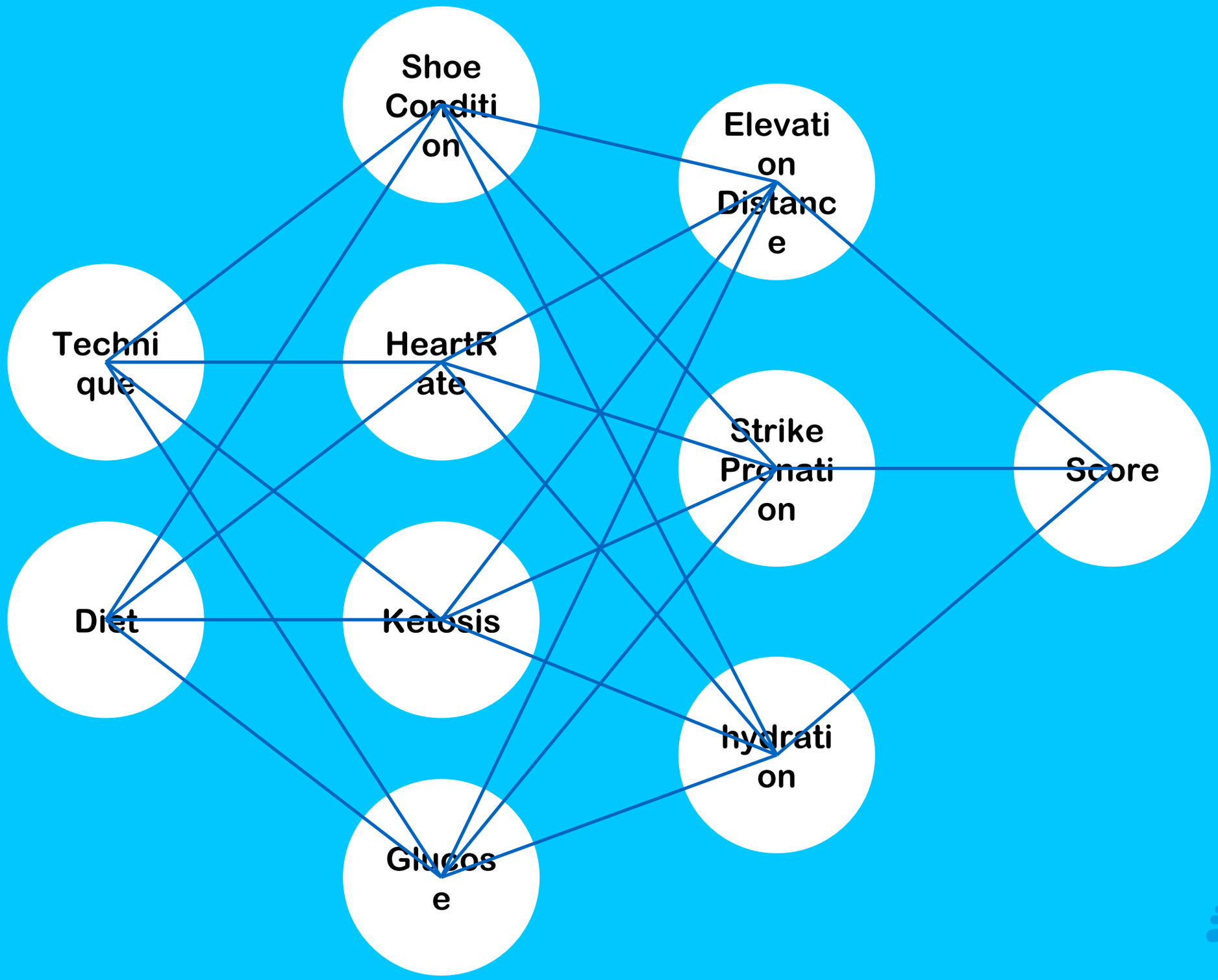
Sport Science Analytic Complex Multi Level Problem



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UNDERPRONATION

NORMAL PRONATION

OVERPRONATION

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$139 USD

(¥ 866)

A revolutionary new way to bring running science to everyday people. Our smart insole sends running form information straight to your smartphone via Bluetooth for real time advice.

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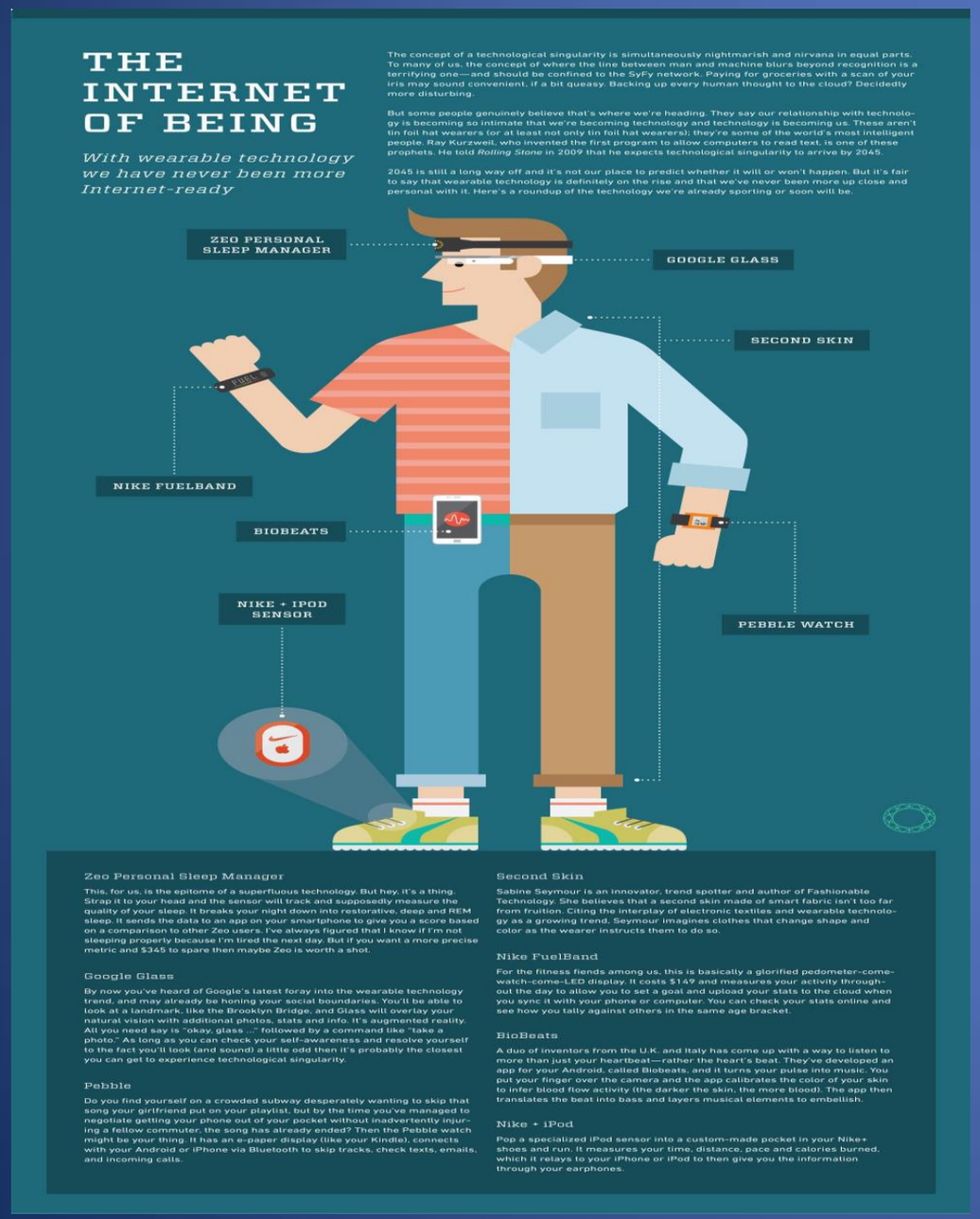
Deliver Core Value through patented Software and membrance based Mems Sensors (forceSense Technology)



Patented Cloud Based
Machine Learning
Score coaching
App

Cheap Commodity MCU/Bluetooth
And Accelerometer

Patented Membrance Mems ForceSense
Technology

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Patent

UTILITY APPLICATION

OF

CHIN KEONG LAM

FOR

UNITED STATES PATENT

ON

METHOD AND SYSTEM FOR PROCESSING RUNNER DATA

Docket Number:	1405001
Sheets of Drawings:	Sixteen (16)
Sheets of Written Description:	Twenty (20) (including the cover)

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No competition

	AMTI	Pedars	ProfileMyRun	Nike+ Pod	Garmin	Sensoria	Moticon
Posture	yes	no	yes	no	no	no	no
Precision Force - 500 lbs	yes	yes	yes	no	no	no	no
Strike Pattern	yes	no	yes	no	no	yes	yes
Pronation	no	no	yes	no	no	no	no
Cadence	yes	no	yes	yes	yes	yes	yes
Active Feedback for Posture Correction	no	no	yes	no	no	no	no
Low Resolution Tactile	yes	yes	yes	no	no	yes	yes
Portable 3 Pieces	no	yes	no	no	no	yes	yes
Portable One Piece Integrated	no	no	yes	yes	yes	no	no
Dehydration Monitor	no	no	yes	no	no	no	no
Weight Monitor	no	no	yes	no	no	no	no
Sport Data Science Database	no	no	yes	no	no	no	no
Machine Learned Training Score System	no	no	yes	no	no	no	no
Trainers Endorsed Score System	no	no	yes	no	no	no	no
Shoe Maker Endorsed Benchmark Score	no	yes	yes	no	no	no	no
Social Media Apps Profile Bragging	no	no	yes	no	no	no	no
26.2 Miles (Marathon) Race Tested	no	no	yes	yes	yes	no	no
Price	$100,000.00	$20,000.00	*$139.00*	$99.00	$49.00	$200.00	$159.00

No competitor in our class of offering either from H/W standpoint or the sports social media aspect!

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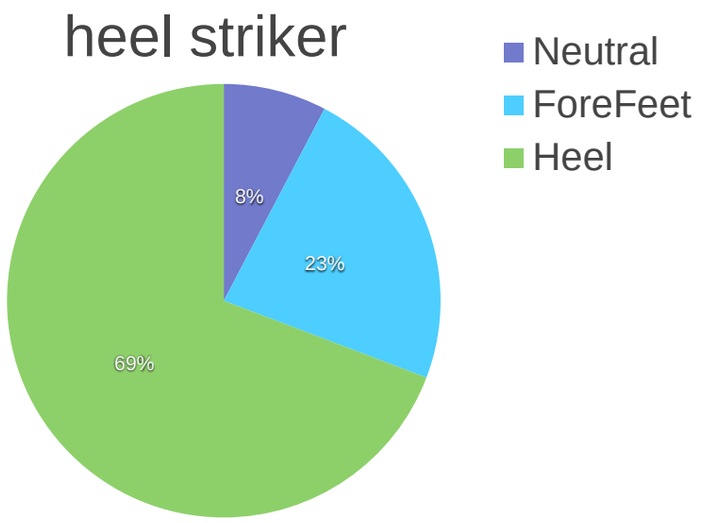
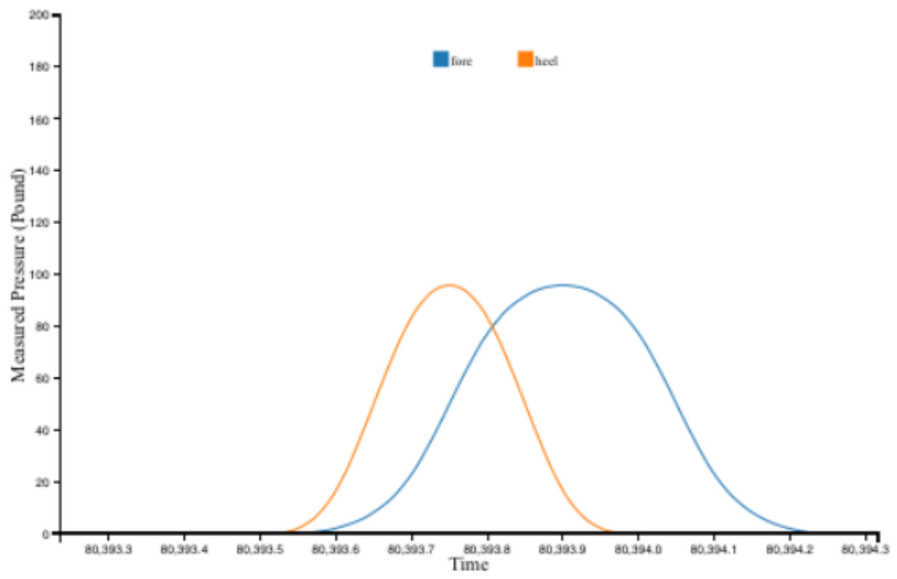
Score

20%

vs





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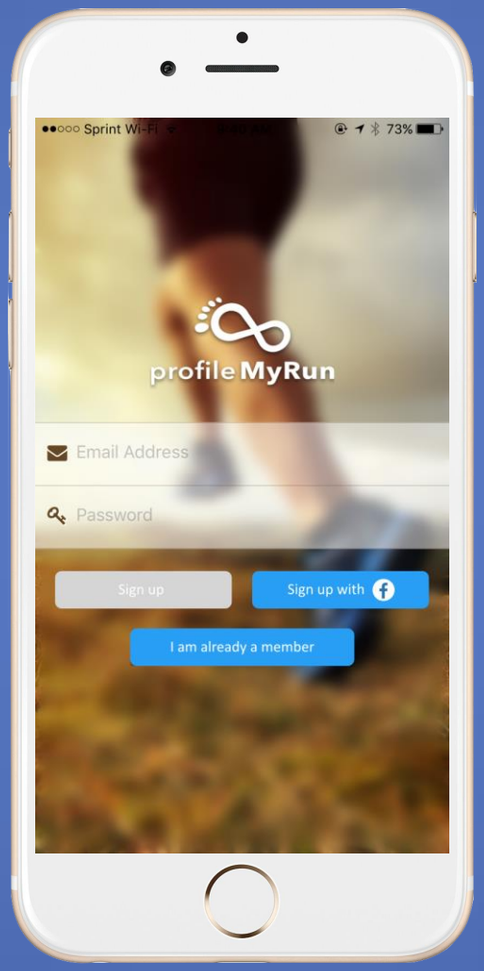
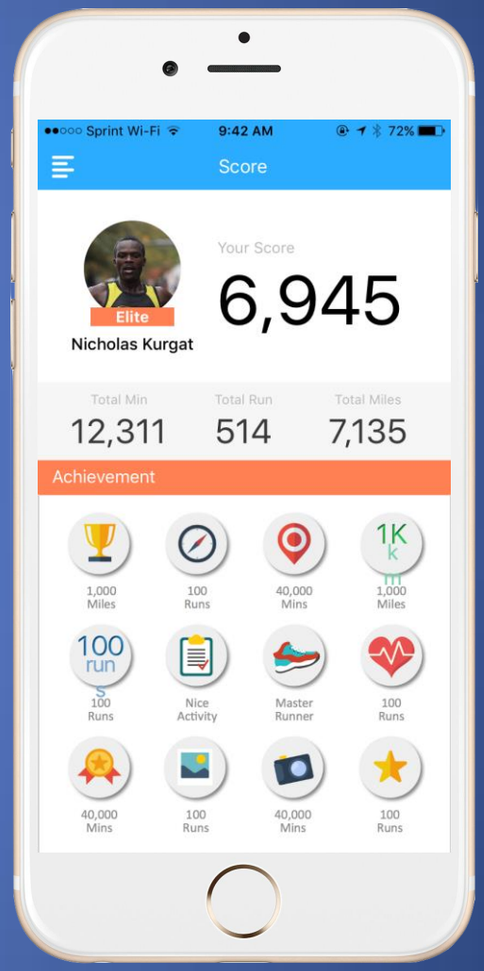
The technology – how it works





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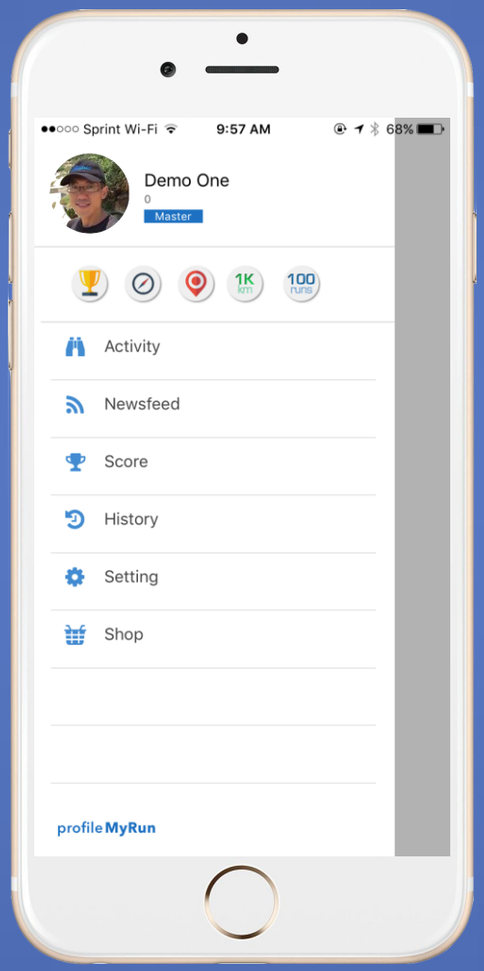
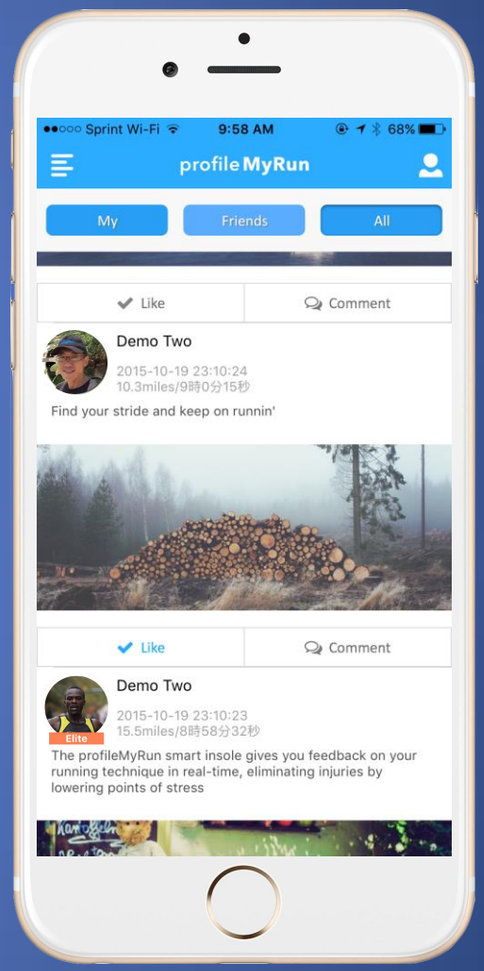
The technology – how it works





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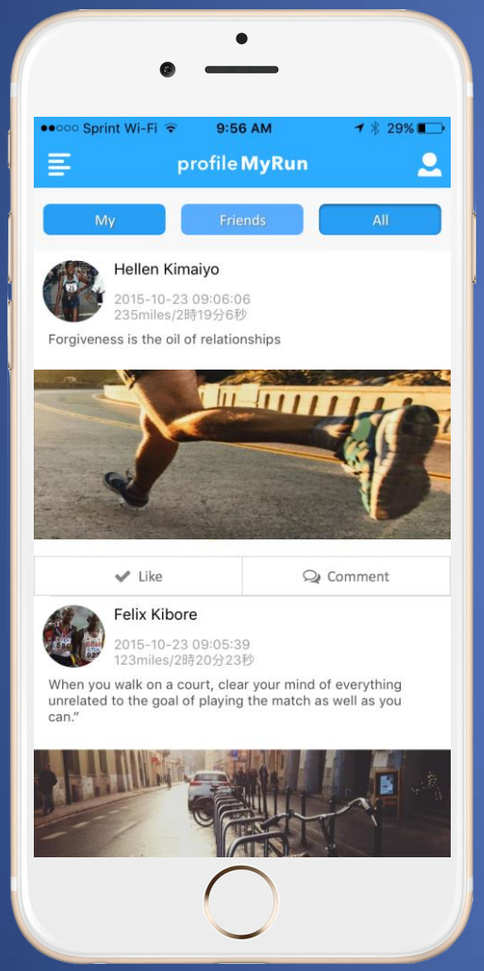
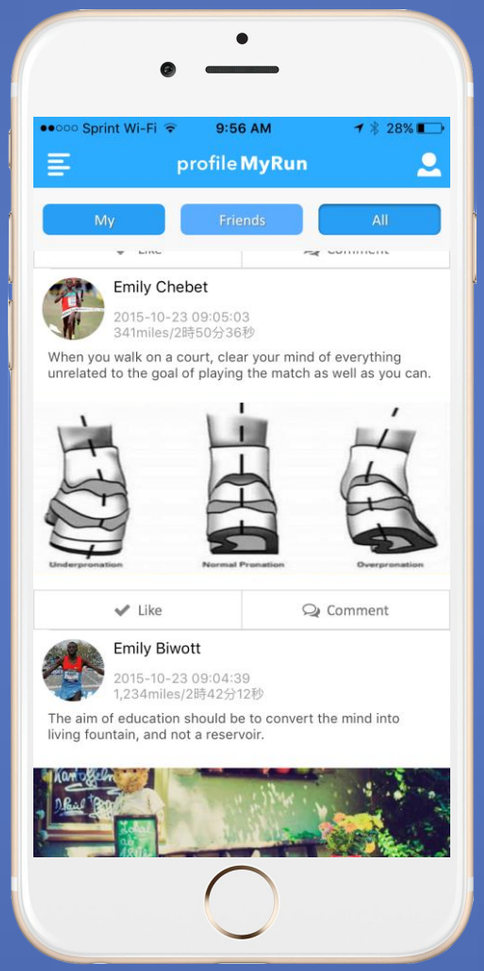
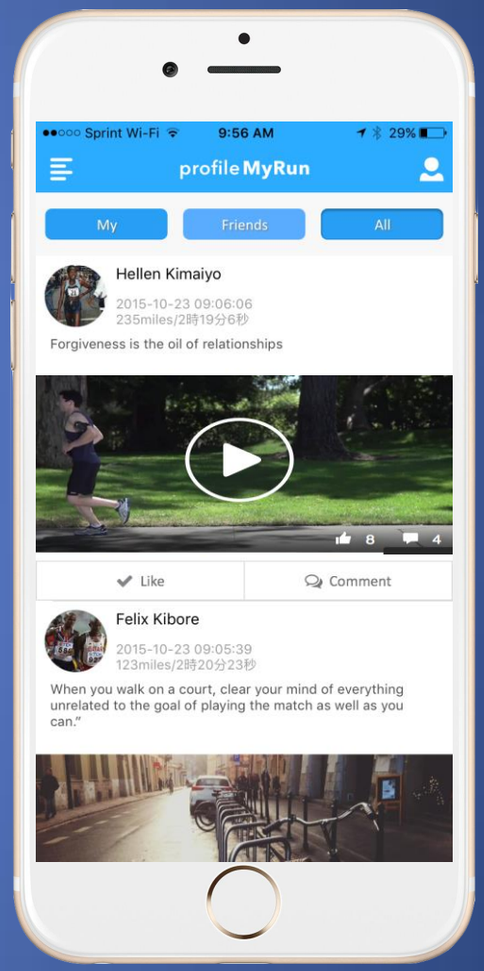
The technology – how it works







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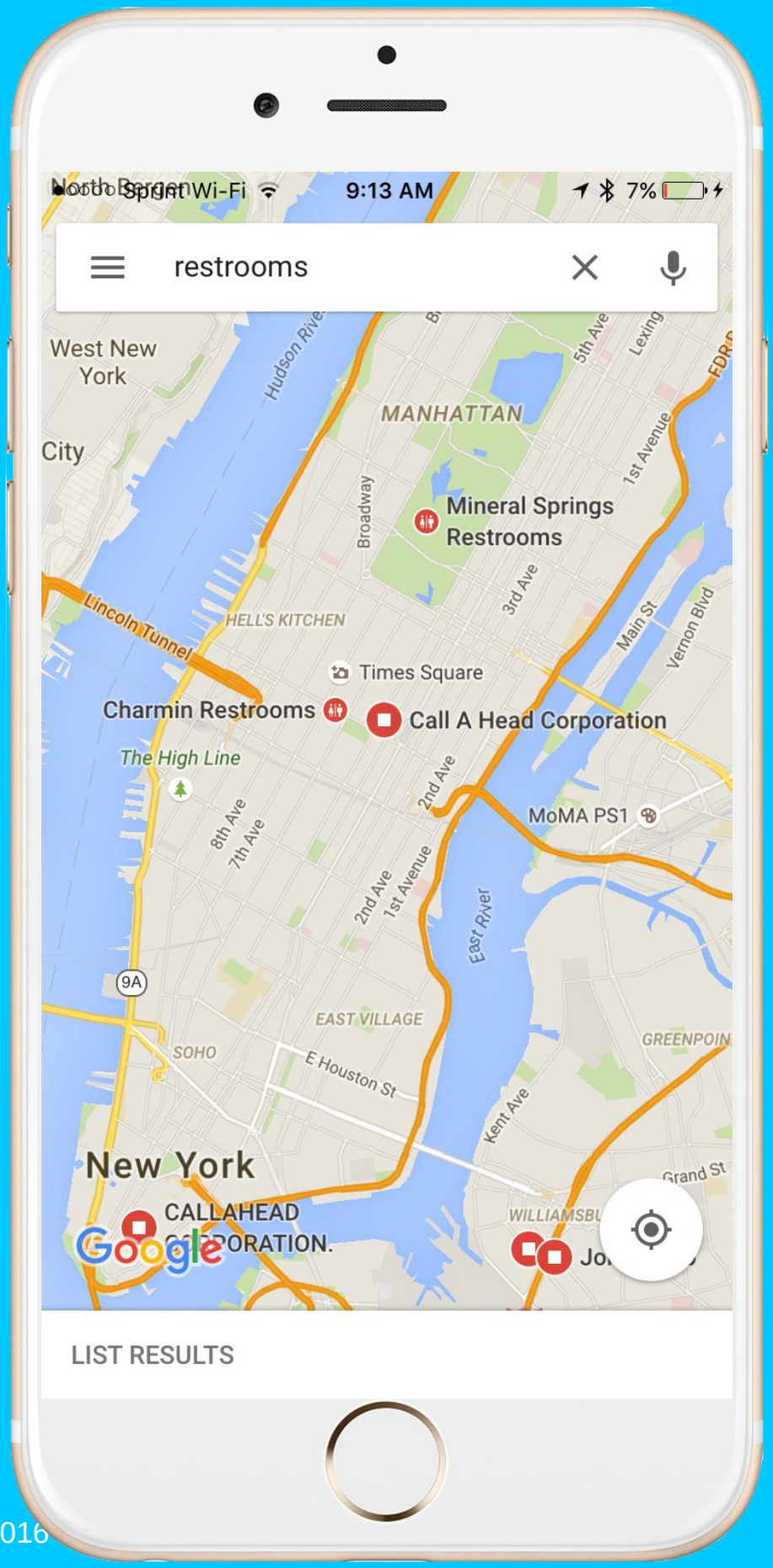

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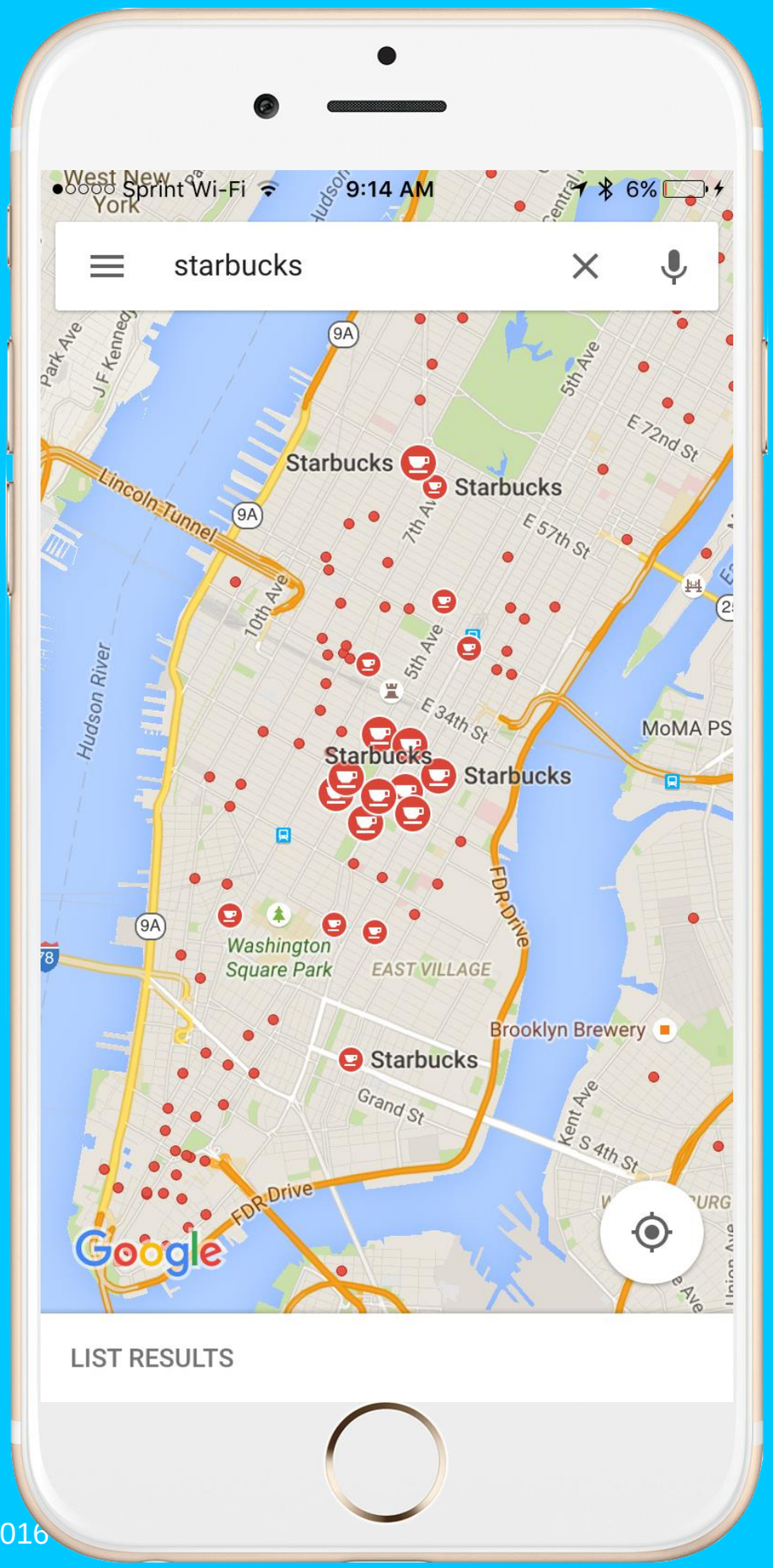

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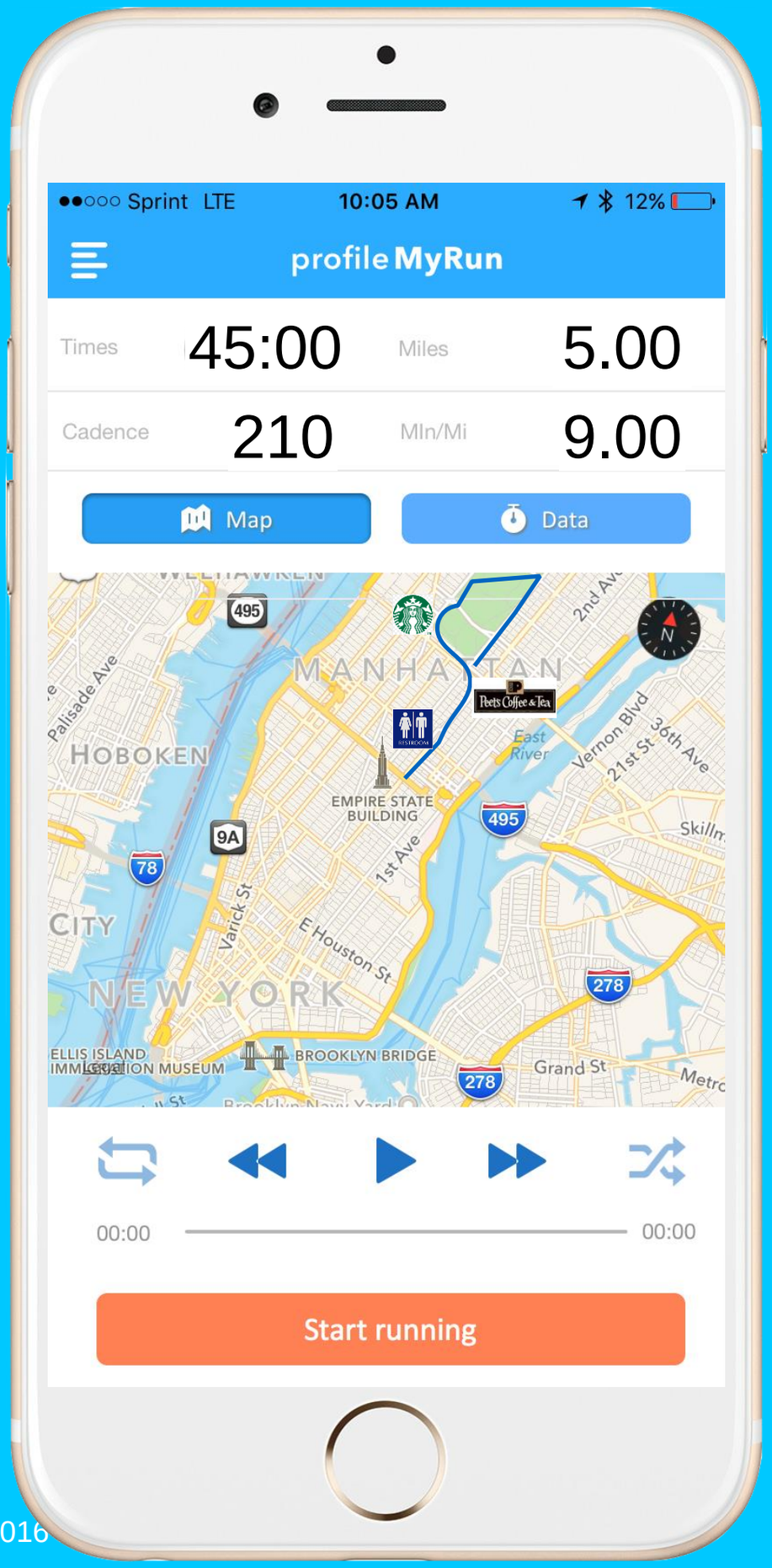

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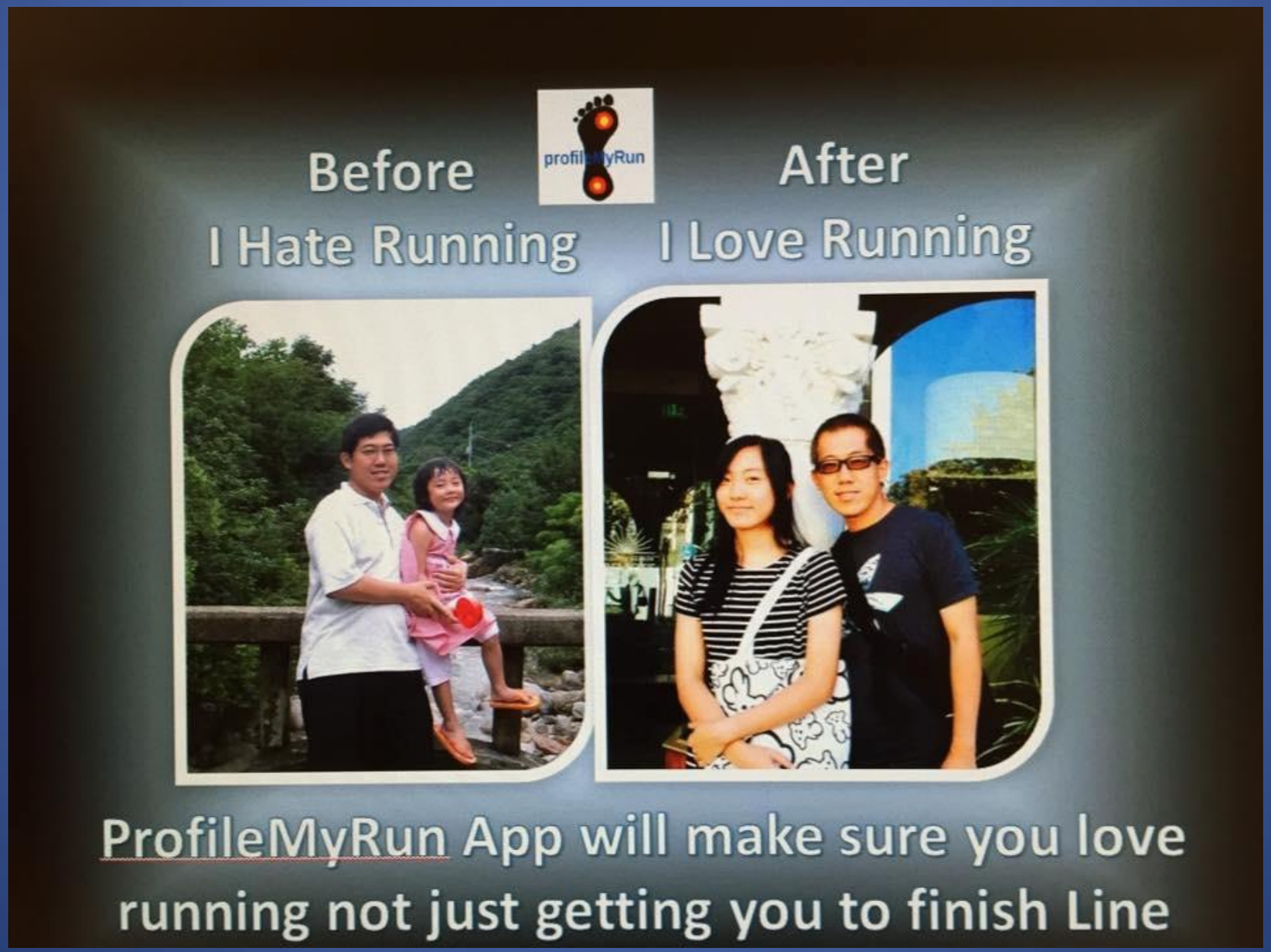
Testimonial of Success w/ profileMyRun™



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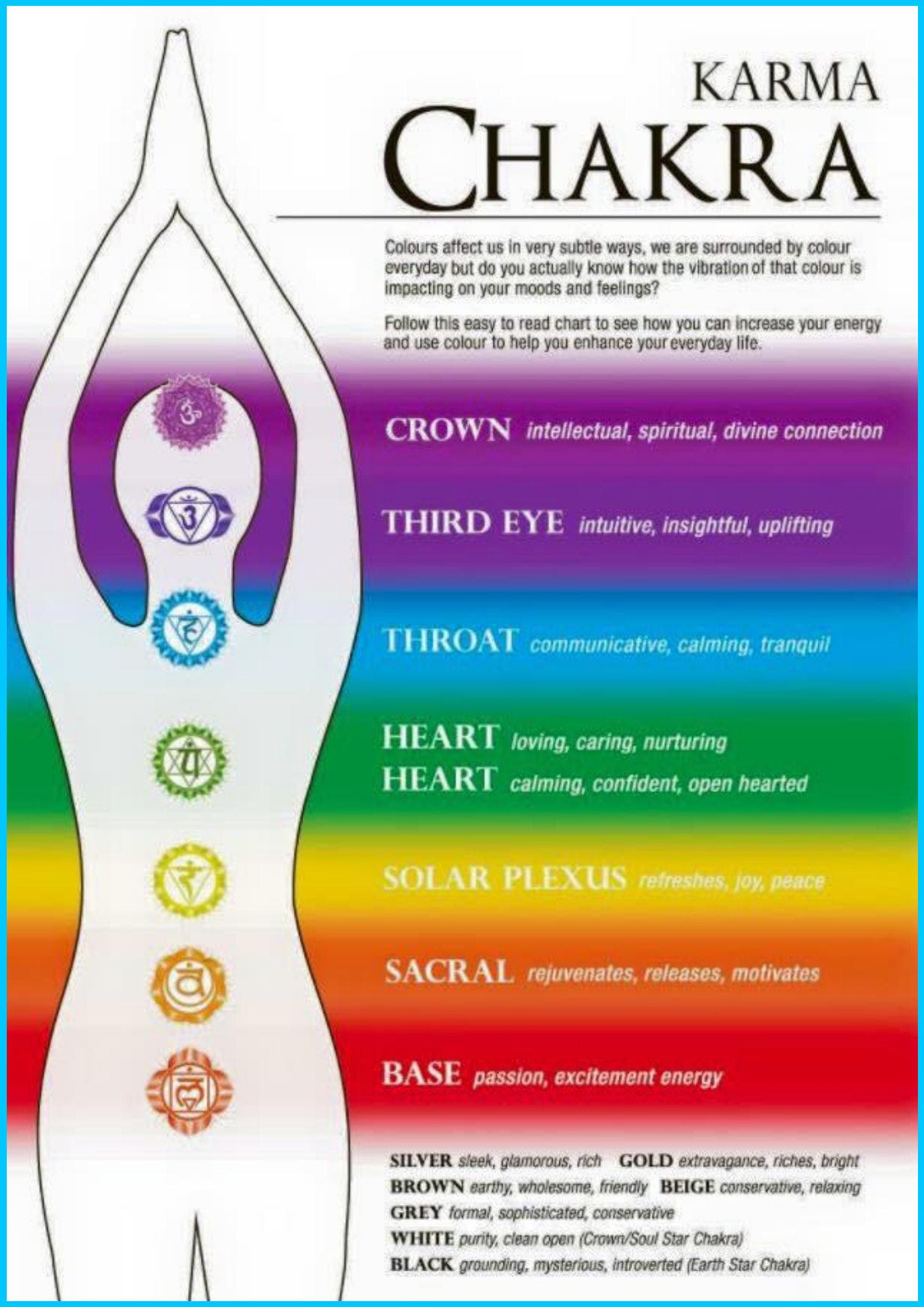

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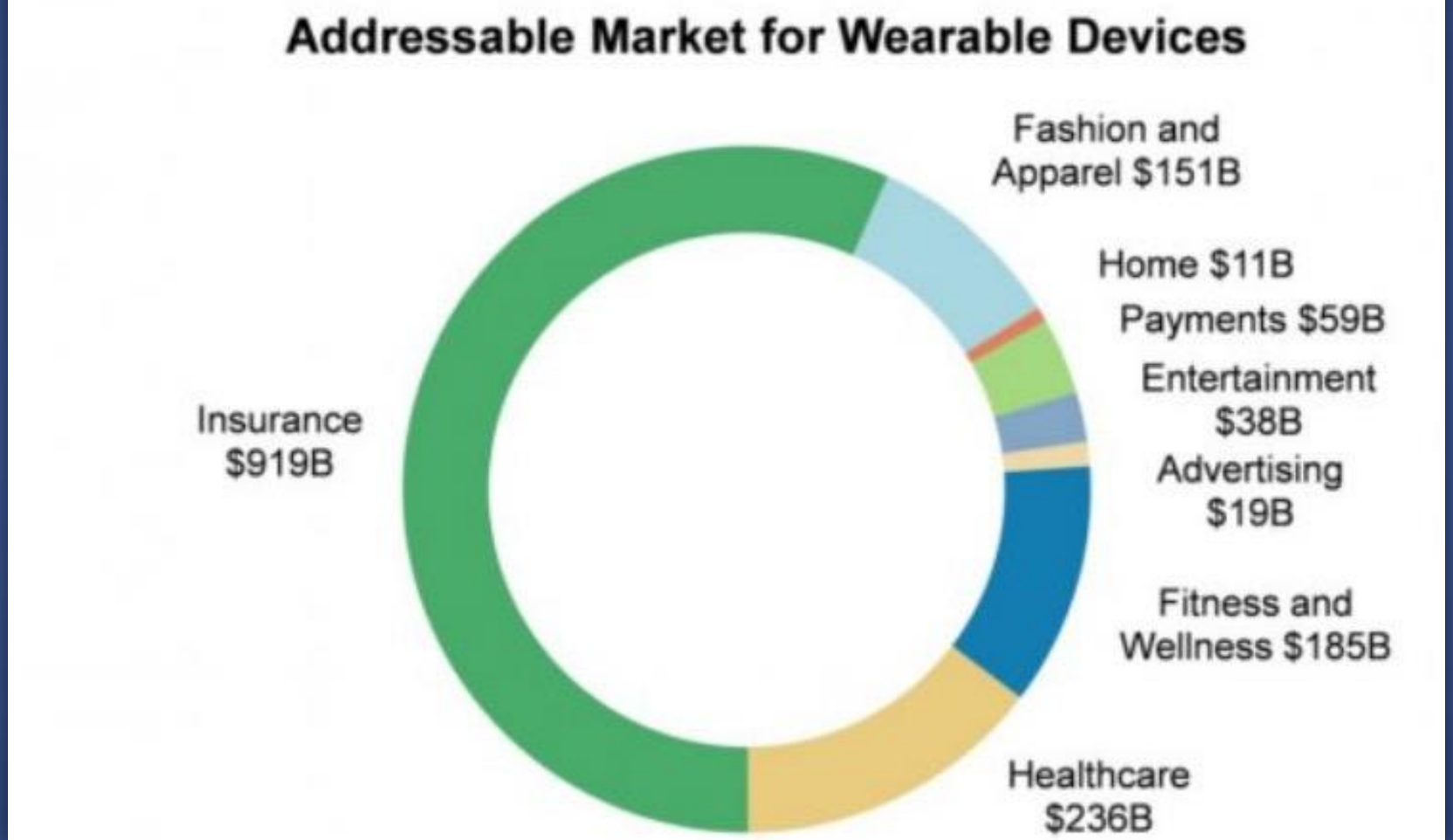
Total Market Cap
185B

Exhibit 17: Wearable Devices Address $1.6T of Global Consumer and Business Spending



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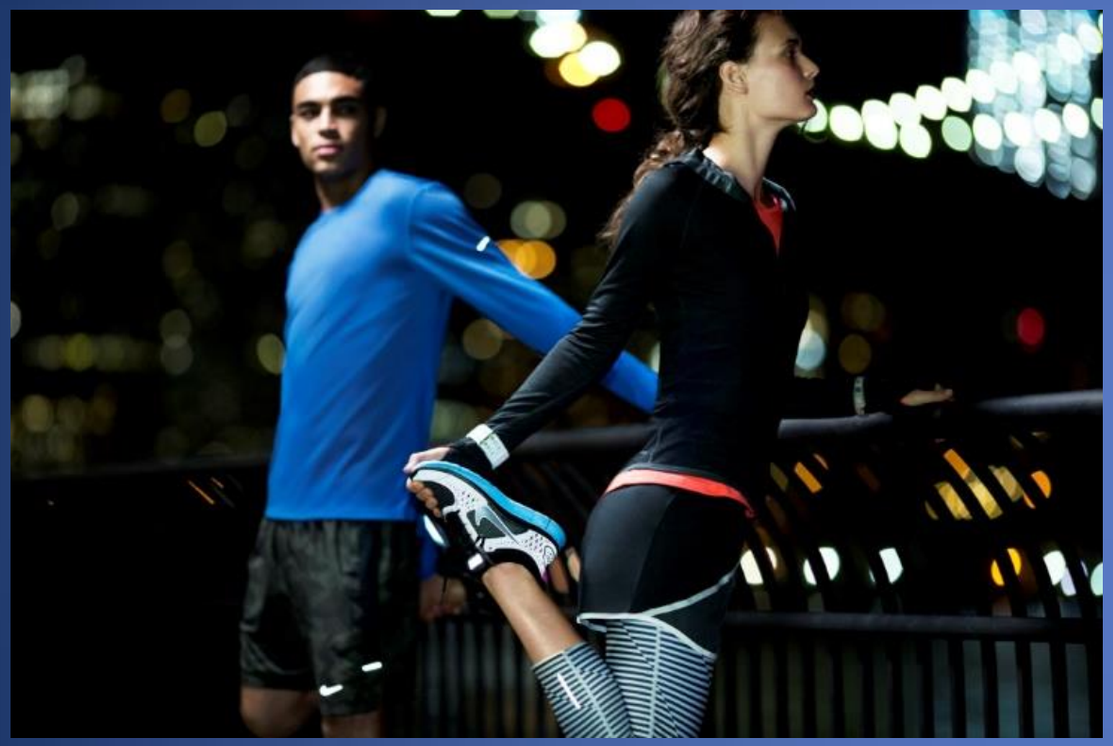
Sports Science & Data Analytics is a Growing Field!



Sports apparel & footwear company?

OR

Sports Analytics-as-a-Service company?

***openSports.io** sports analytics industry initiative*

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