



The Future of Musculoskeletal Healthcare

You're looking at it

The Elements of the Problems...

Musculoskeletal Disorders

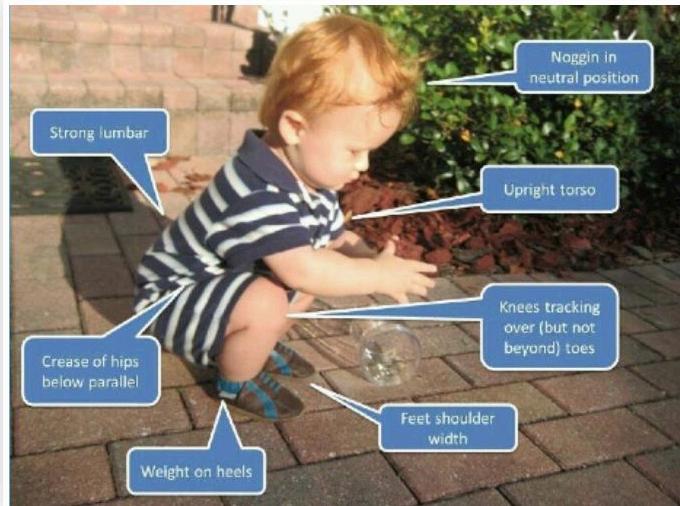
- 1 20%-33% of people across the globe live with a painful musculoskeletal condition.**
- 2 Leading cause of disability in four of the six World Health Organization regions.**
- 3 Affect 11 million people each year, and this number is projected to grow to 15 million by 2031.**
- 4 Most Common Reason for Physician Consultation.**
- 5 Constitutes 10-20% of primary care provider workloads.**
- 6 Cost an annual \$37 billion healthcare expenditure.**

Current Solutions - Assessment

Musculoskeletal Disorders Canada



Range of Motion



Movement Pattern

Range and patterns of movement estimation is a crucial concern for clinicians in the diagnostic and functional assessment of patients with musculoskeletal disorders. To obtain a record of the degree of impairment and the treatment progress of a patient, range-of-motion measurements and movement analyses are used.

Current Solutions - Assessment

Musculoskeletal Disorders Canada



Goniometer



Inclinometer



3D Motion Capture System

Clinicians use numerous instruments for diagnostic and functional assessment, but such tools appear to have significant drawbacks (time consuming, expensive).

Current Solutions - Prevention & Rehabilitation

Musculoskeletal Disorders Canada



Expensive & Inaccessible

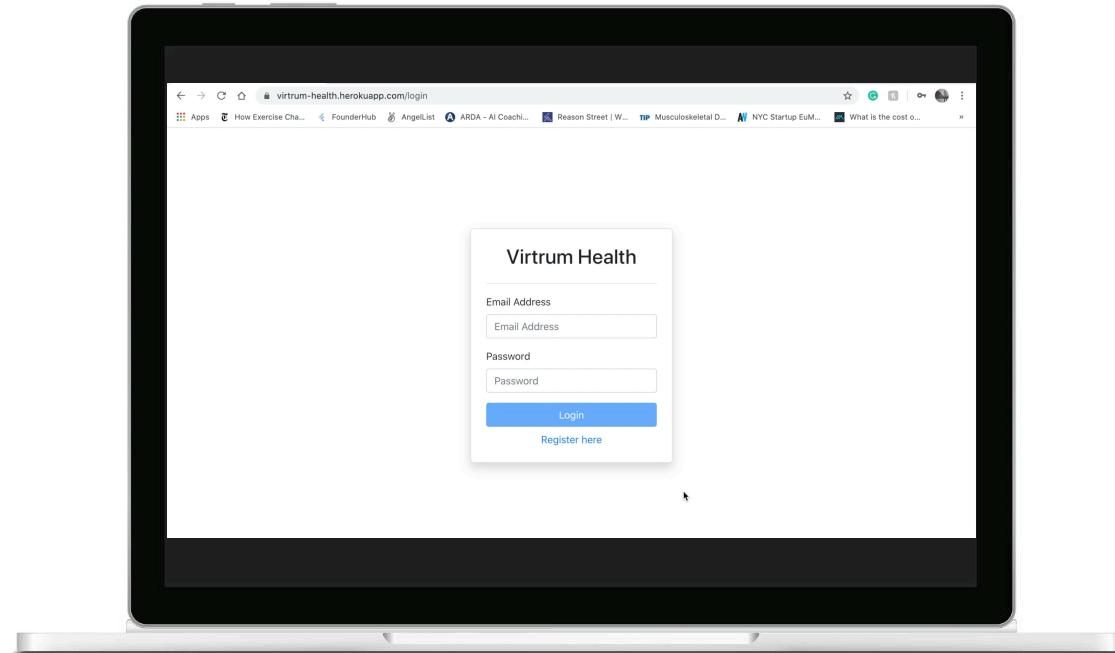
Prolonged Treatment Time

Increased Healthcare Costs

With the current healthcare systems around the world, prevention and rehabilitation programs are expensive and inaccessible to many of us. Inaccessibility often leads to prolonged treatment times and increased healthcare costs.

Virtrum Health - Healthcare Driven By Data

Healthcare Anytime Anywhere



Virtual Consultation



Automated Biomechanical Assessment



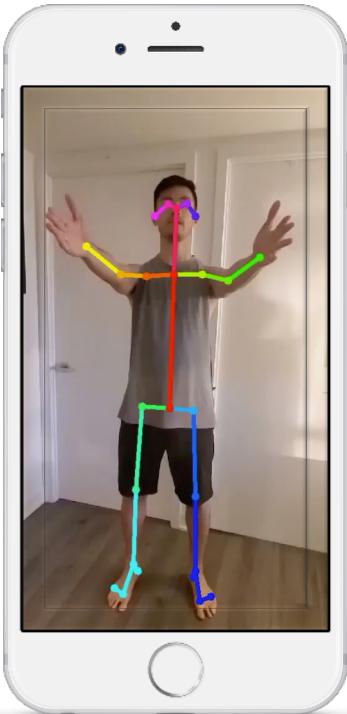
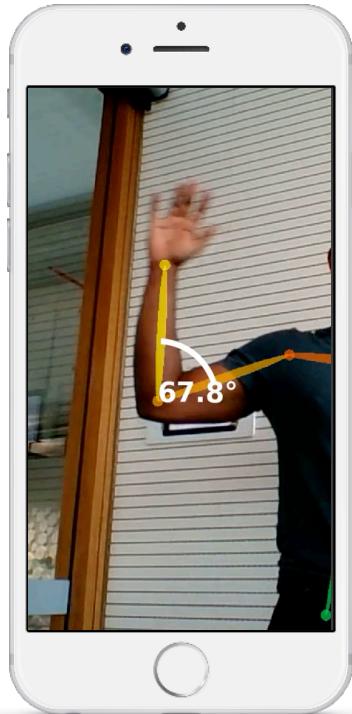
Data-Driven Analysis



Optimizing Patient Flow

Virtrum Health - Healthcare Driven By Data

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Automated Biomechanical Assessment



Data-Driven Analysis



Optimizing Patient Flow

Virtrum Health - Healthcare Driven By Data

Healthcare Anytime Anywhere

- A digital health platform that allows clinicians to perform highly precise biomechanical assessments virtually.
- Integration of sports medicine protocols and artificial intelligence.
- The automated measurement ensures consistent evaluation regardless of who is carrying out the assessment, eliminating the need for any prior knowledge.

Automatically analyze human movement, identify nuances in movement patterns, and provide clear, actionable insights for clinicians

Virtrum Health - Healthcare Driven By Data

Core Technology

Hybrid Artificial Intelligent Model of Expert System

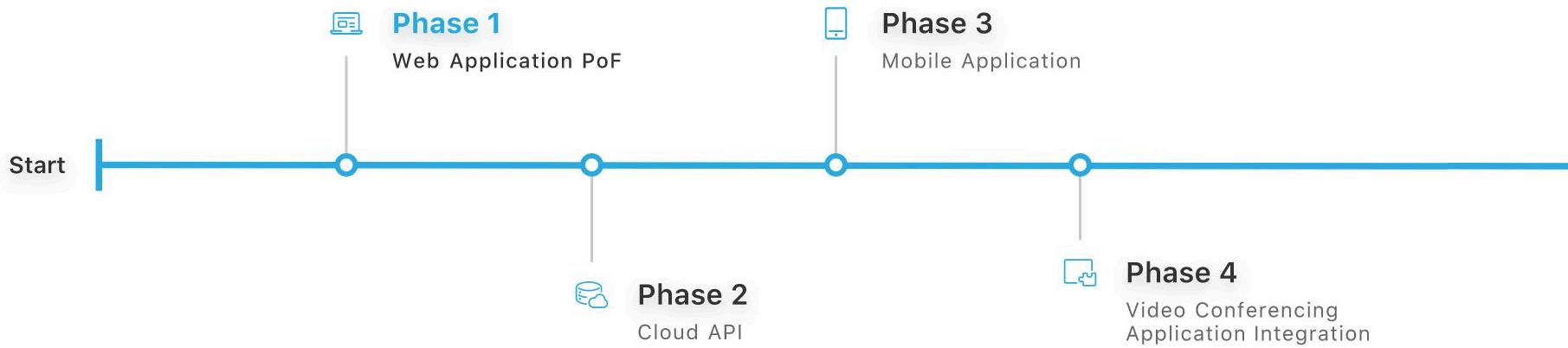
The expert system consists of six global assessment rules which provide the positive and negative feedback of movement.

Fully Convolutional Neural Network

The FCNN time series classification model will work alongside with expert system to serve as an aided model and provide support for decision making.

Our Story

Product/Technology Development Roadmap



Rehabilitation and Mobility Market in Canada

Software as a Service Business Model



Meet Our Team



Victor Wu

Registered Kinesiologist
Master of Professional Kinesiology



Yong Xuan

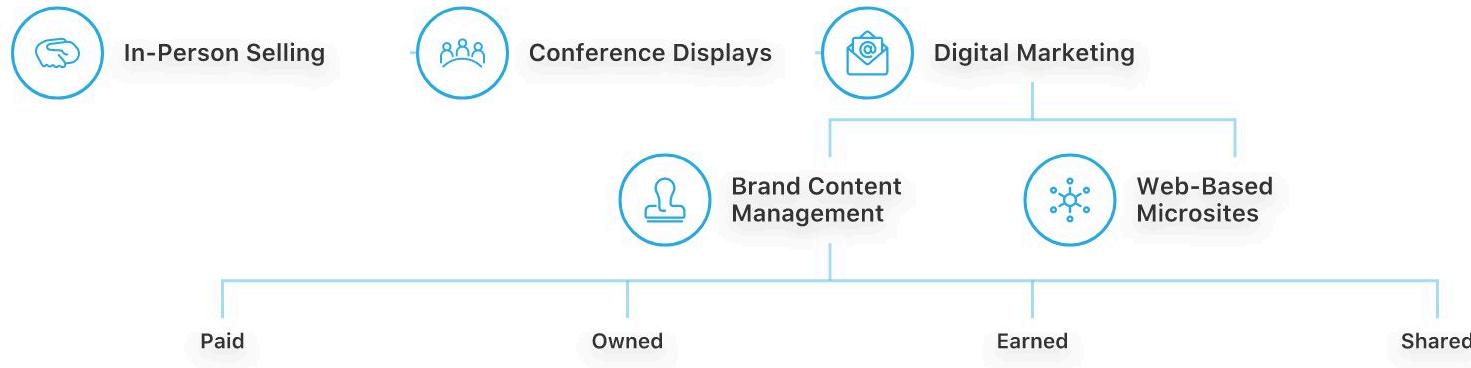
Machine Learning Engineer
Master of Computer Science



Iris Deng

UX/UI Behavioural Designer
Bachelor of Psychology & Economics

Promotion & Advertising



Thank You

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"PATIENTS HAVE A REALLY HARD TIME GETTING THEIR RANGE OF MOTION BACK SOMETIMES ESPECIALLY AFTER TOTAL KNEE REPLACEMENTS. THIS[VIRTRUM HEALTH] COULD BE REALLY USEFUL TO IDENTIFY THE PATIENTS THAT AREN'T MAKING PROGRESS TO AVOID LESS THAN IDEAL OUTCOMES OR NEEDING ANOTHER SEDATION WITH MANIPULATION UNDER ANESTHESIA."

- Dr.Drew Albert, MD, MBA Orthopedic Surgery
Resident at Spectrum Health

