Jumpstarter ZPIRE

Team Name: TrailPulse
Team Member: Yuhang ZHOU (Team Leader), ChunWa LUK(Jason), TszHin YUEN

Team Email: trailpulse2025@gmail.com
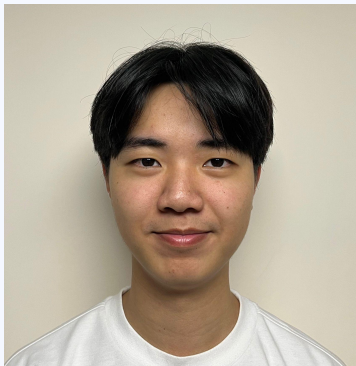
Team Information & Background

Yuhang ZHOU

Jack(leader)

u3653226@connect.hku.hk
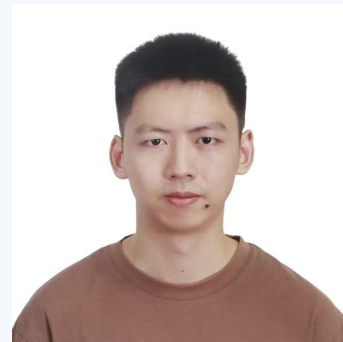The University of Hong Kong
MSc in Electrical Engineering
Year 1

ChunWa LUK

Jason

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TszHin YUEN

Simon

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Hong Kong Baptist University
MSc in Data Analytics &
Artificial Intelligence
Year 1

Team Information & Background

Why Jumpstarter ZPIRE

(1) We want to provide personalized sports training — improve the running performance and safety.

(2) With ZPIRE's Workshops and Platform, we can build real-time models, test them, and grow to a larger scale.

Team experience

Yuhang ZHOU: Huwei Full-Stack and AI Engine, Edge Computing Device Programming for AI Projects.
ChunWa Luk: Experience in EdgeAI development and hardware deployment.
TszHin YUEN: MSc in Data Analytics & Artificial Intelligence, Experience in Front-end development and Ops engineer.

Team dynamics

Collaboration Framework:
Weekly meeting
Yuhang ZHOU:
End-to-End Project Architecture;
Strategic Planning & Roadmapping;
Cohesive Strategy Formulation;
Functional Prototype Deployment;
TszHin YUEN:
Data Collection;
Data Processing;
Application Visualization & UI;
ChunWa LUK:
Further exploration;
Hardware or EdgeAI deployment;

Introduction

Inspiration:

While Hong Kong offers world-class recreational infrastructure—from country park hiking trails to district fitness tracks—most athletes still train with generic plans that ignore their physiological responses and performance data. Our inspiration comes from leveraging these incredible public resources through AI to solve the very problem they unintentionally create: fragmented workout data across different locations and lack of personalized guidance.

Core Value Proposition:

We bridge the gap between Hong Kong's exceptional physical infrastructure and athletes' individual physiological needs. By making expert-level training guidance accessible through the very trails runners already use, we're not just optimizing performance—we're enhancing training safety, preventing injuries, and maximizing the wellness potential of Hong Kong's unique urban-natural landscape.
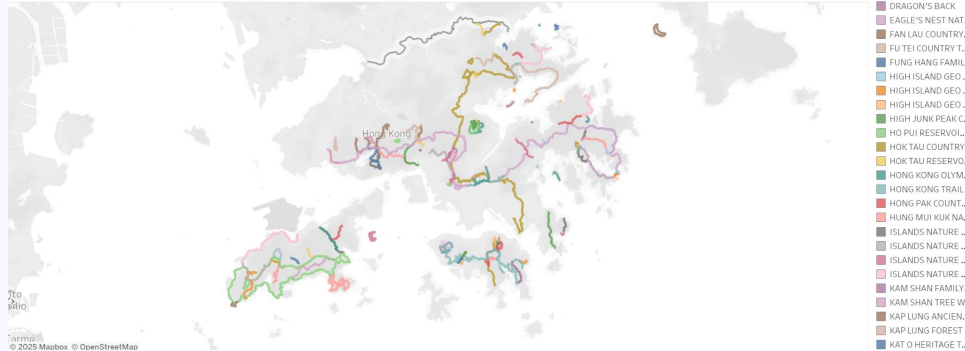
Project Overview

We've developed an AI-powered platform that transforms Hong Kong's extensive trail network into personalized training grounds. By integrating open data on hiking trails, jogging tracks, and fitness routes with real-time athlete metrics, our system:
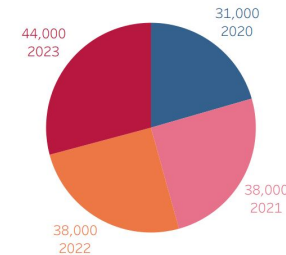(1)Analyzes weekly training balance against sports science standards (ACSM guidelines).

(2)Provides location-specific recommendations - suggesting optimal trails in country parks based on elevation, distance, and surface type.

(3)Delivers real-time adaptive coaching during runs - monitoring pace and heart rate to maintain optimal training zones.

(4)Generates structured training plans for specific Hong Kong routes - whether preparing for Lantau Peak hikes or Bowen Road runs.

Investigation on Current State of Running and Sports in Hong Kong

Link:

https://public.tableau.com/app/profile/tsz.hin.yuen/viz/HikingTrailsinCountryParks/1?publish=yes

Link:

https://public.tableau.com/app/profile/tsz.hin.yuen/viz/GDPatmarketpricesofsportsandrelatedactivitiesinHongKongMn/1?publish=yes

Thanks!

Do you have any questions?
Contact:
TrailPulse
trailpulse2025@gmail.com

This PPT is made by Yuhang ZHOU, ChunWa LUK, TszHin YUEN

Outcome Support

Database(from data.gov.hk):

- Hiking Trails in Country Parks:

  https://data.gov.hk/en-data/dataset/hk-afcd-afcdlist-hikingtrailscp

- Feature Articles on Culture, Entertainment and Recreation - Sports and Related Activities in Hong Kong:

  https://data.gov.hk/en-data/dataset/hk-censtatd-tablechart-fa100281

- Fitness Walking Tracks in 18 Districts:

  https://data.gov.hk/en-data/dataset/hk-lcsd-facility-facility-fw

- Location of Jogging Tracks and Fitness Trails:

  https://data.gov.hk/sc-data/dataset/hk-lcsd-facility-facility-jtft

Data Visualization:

https://public.tableau.com/app/profile/tsz.hin.yuen/viz/HikingTrailsinCountryParks/1?publish=yes

https://public.tableau.com/app/profile/tsz.hin.yuen/viz/GDPatmarketpricesofsportsandrelatedactivitiesinHongKongMn/1?publish=yes