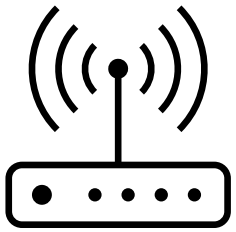
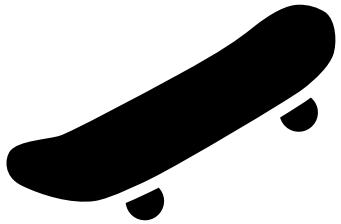
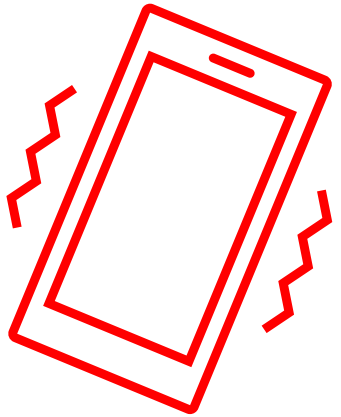
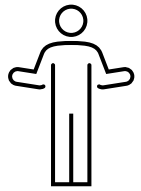
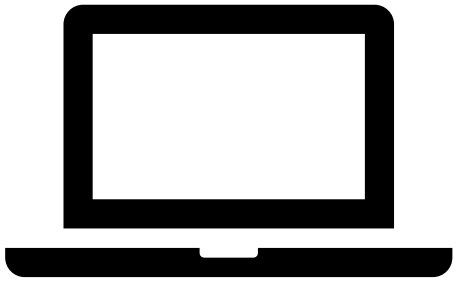
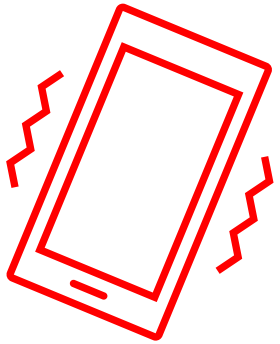
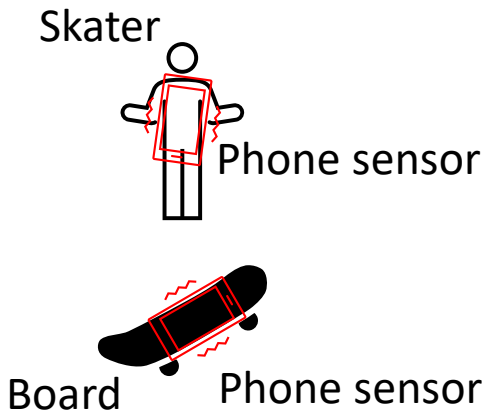







Overview of device setup and operation

Usage

- Attach sensors to board and skater
- Place laptop in secure location away from skater and board
- Turn on sensors and start laptop
- Start the model to analyze the data received from sensor A and sensor B in real time
- Model will predict the best times for the skater to pump on the transition, based on similar data it has been trained on from a similar transition type (half pipe, pump track etc.)
- Skater listens to the audio cues
- Explore a future version that can learn a new transition in real time or learn to teach on an unseen transition

Initial setup

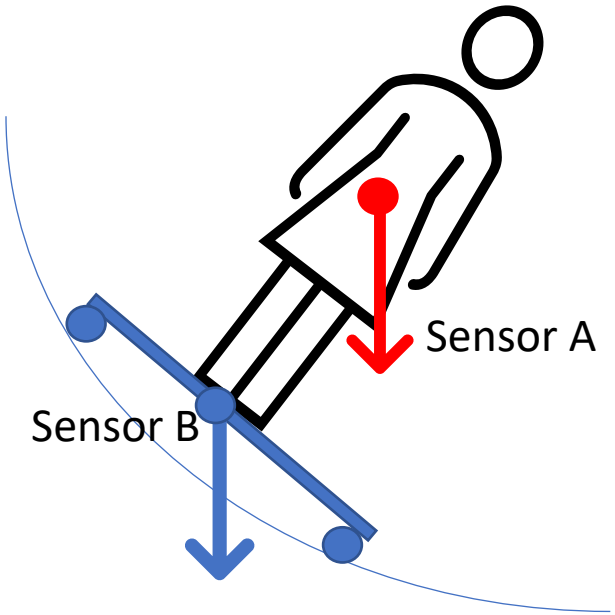


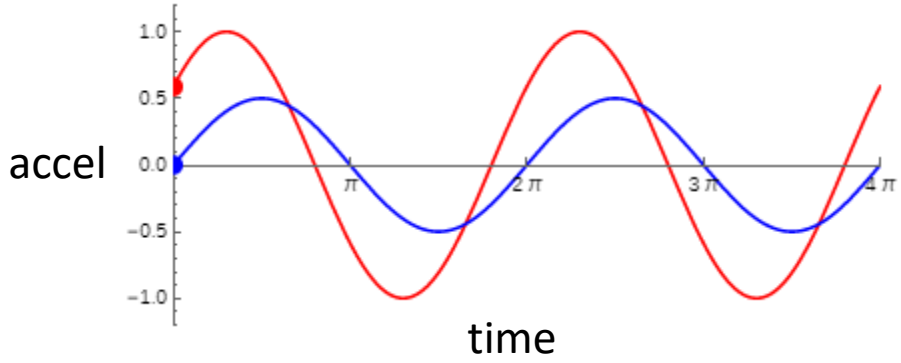
Cell phone hotspot for shared wi-fi

Laptop running ML model

Half Pipe

Data sources and expected results





I would expect to see the output of both sensors looking something like this for successful pumping. N.B I have no idea if the phase shift is remotely correct yet !

Red is sensor A
Blue is sensor B

The board sensor data does look like a sine wave as it is ‘fixed’ to the transition. I have seen this from my real world data.

The skater accelerates faster than gravity at the right time to add impulse on the transition