


A DIY low-end smart static bike!

Enzo Barbaguelatta <enzo.barbaguelatta@alma.cl>

ALMA Symposium 2021

- Static bikes are a common way to exercising indoors, but dull at the same time. (Nothing beats going outside to bike).

- Sure, there are things like **Zwift/Bkool/etc.** for a more inversive experience, but that option is a bit pricey/pro-oriented.

- I just want to have some fun while static-biking !!! Let's make something to play with a static bike and a PC.

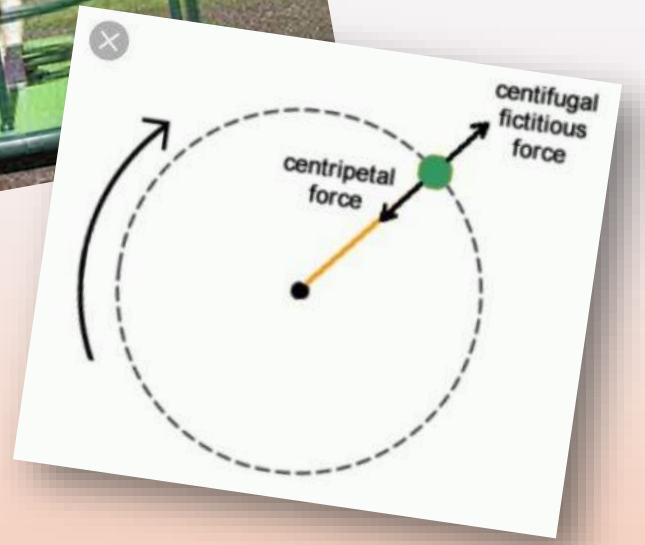
Zwift subscription: $14.99 USD/month
Smart bike trainer: $100-300 USD
Proprietary bike sensors: $30-50 USD each

You will need:

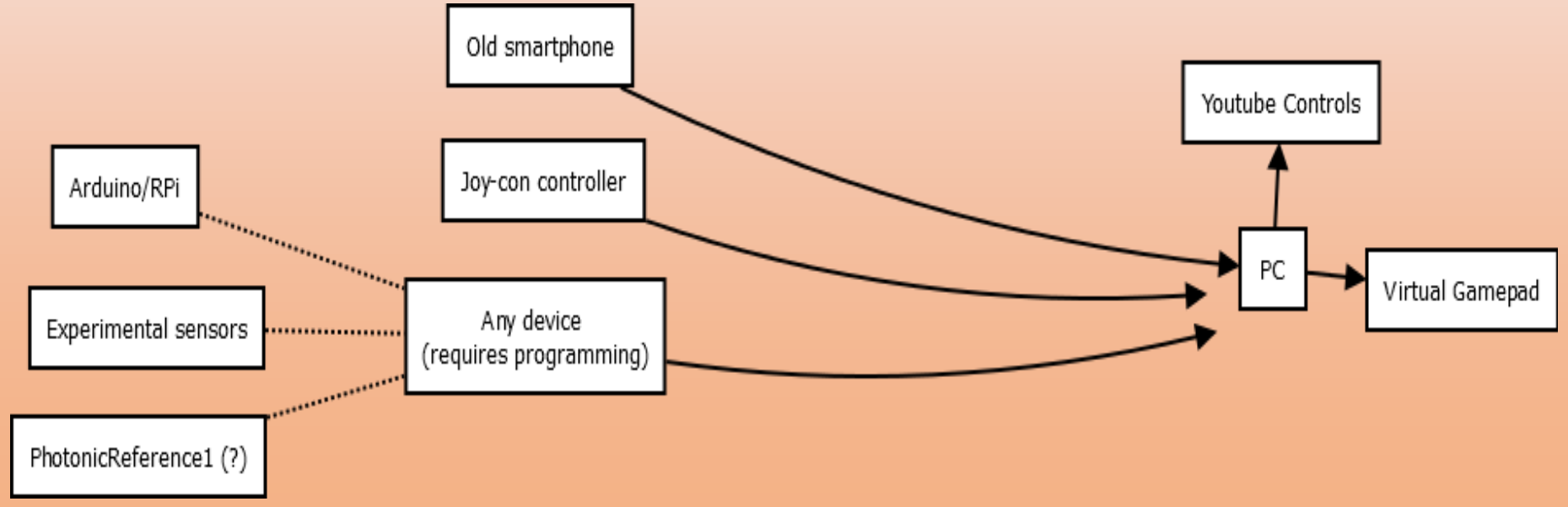
- Old phone Probably you already have one
- (Optional: Nintendo-Joy-con or any device with gyroscope)
- Masking tape (or any glue): $1 USD
- PC (Probably you already have a one)
- YouTube: Free
- Videogames (optional)

Technical overview

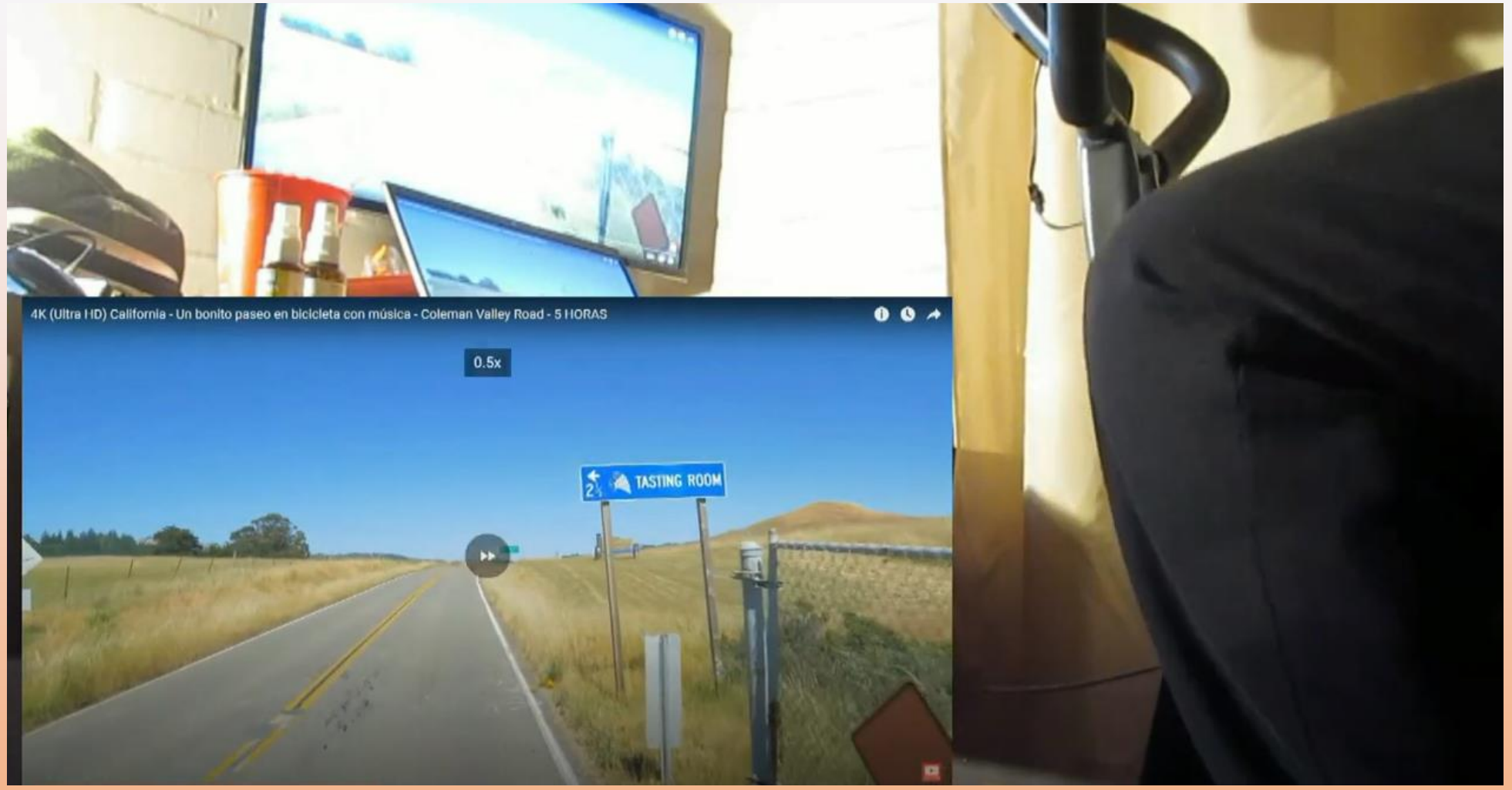
- Vaguely based in an all-time classic ~~deathly-extreme~~ playground game mechanic! (Centrifugal acceleration)



- A Gyroscope in the pedal can allow us to read how strong/weak we are cycling!



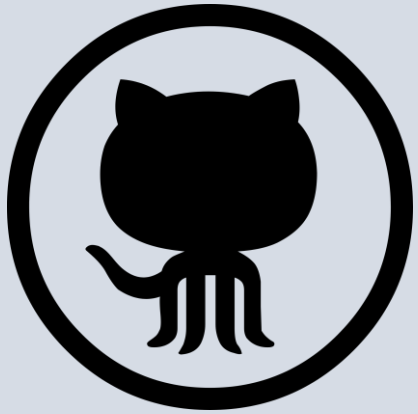
Aaaaand... It works?



https://youtu.be/X2d1NATzZf0

Any future plans with this?

- Not really, made just for fun.
- But anyone can use it for keep a healthy body.
- It’s just a prototype, so It can be expandable to something else…



Source code available at:
https://github.com/elsemieni/diy-smart-static-bike

Thank you for your attention!