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FOOTFALLS & HEARTBEATS

Footfalls Smart Textiles

Remote Healthcare Made Easy

“The textile is the sensor”

100% knitted textile sensors

- Look and comfort of a textile
- Durability of a textile
- Completely invisible to the user
- Total form, shape, and size customisation



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Sleep Tracking & Movement



- NO WEARABLES
- NO CHARGING
- NO HASSLE.
- Completely invisible to the user.
- No need for daily setup or charging.
- Once set up, only check it when you need to.
- Can be used in furniture

- Movement
 - 54 sensors (double bed) actigraphy allows for full-body movement monitoring for 2 people simultaneously
- Respiration Rate
 - Respiration rate from multiple sensors can monitor and locate bed occupants
- Heart Rate (In Development)
 - In development, with promising results from initial trials (data needed alongside an established device).



Gait Analysis



- NO WEARABLES
- NO HASSLE
- CLOTHING IS THE SENSOR

- Completely invisible to the user.
- Machine washable
- Data sent directly to caregivers or clinicians

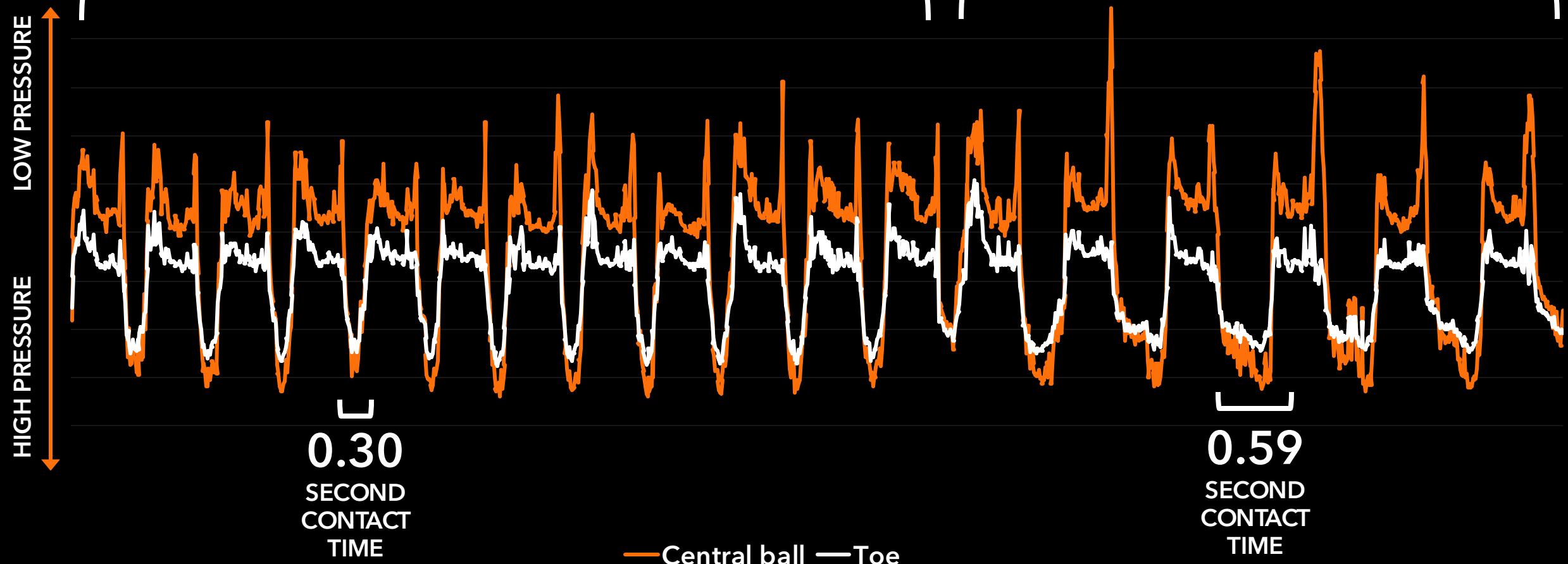
What We Measure (II)

- Step count
- Single Stance Time
- Swing Time
- Double Stance Time
- Ratio of Pronation : Supination
- Whole-Foot Contact Time
- Foot-Area Contact Time
- Heel-Strike
- Toe-Off
- Walking Asymmetry
- Fall detection
- Alterations in gait
- MSK rehabilitation
- Neurological injury rehabilitation
- Neurological change in gait

Fatigue Monitoring

RUNNING

WALKING

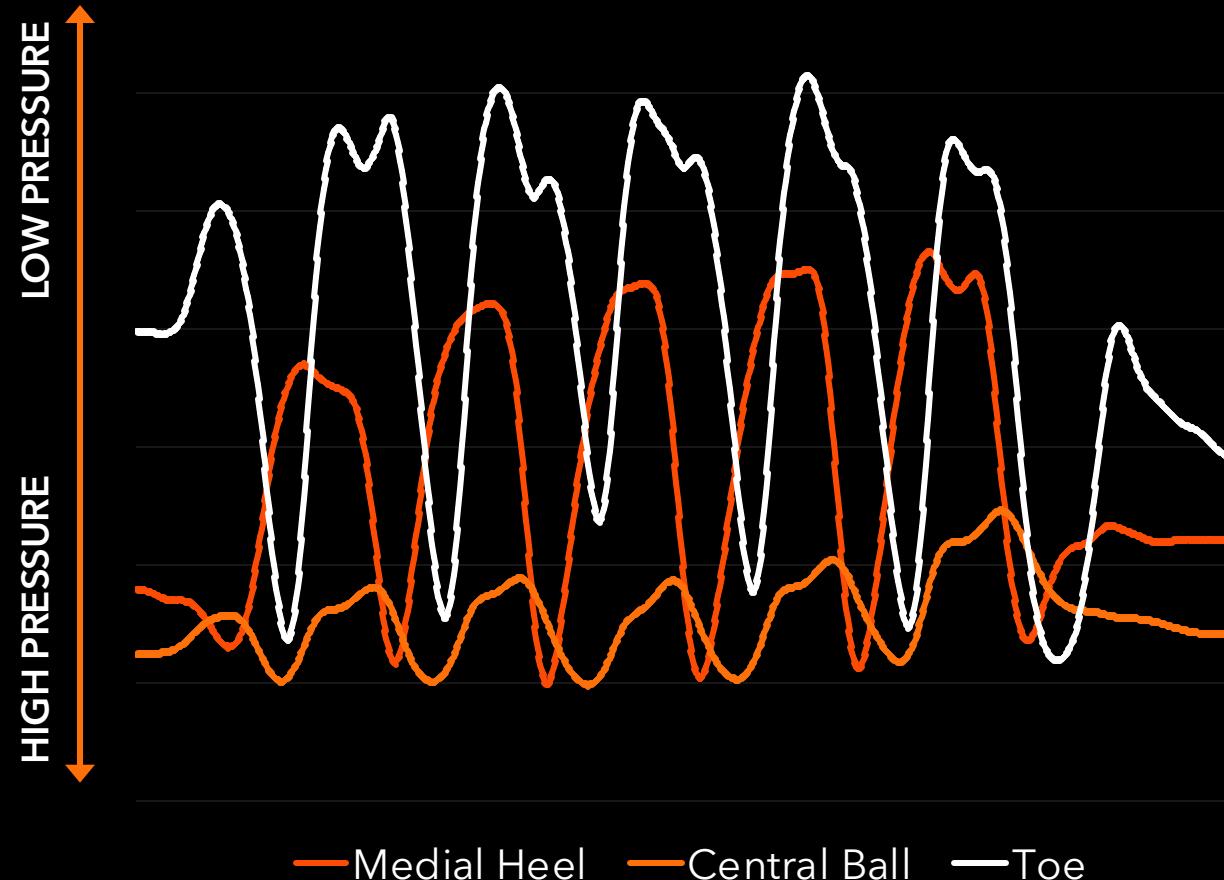


HIGH PRESSURE = FOOT ON GROUND
LOW PRESSURE = FOOT OFF GROUND

Injury Detection

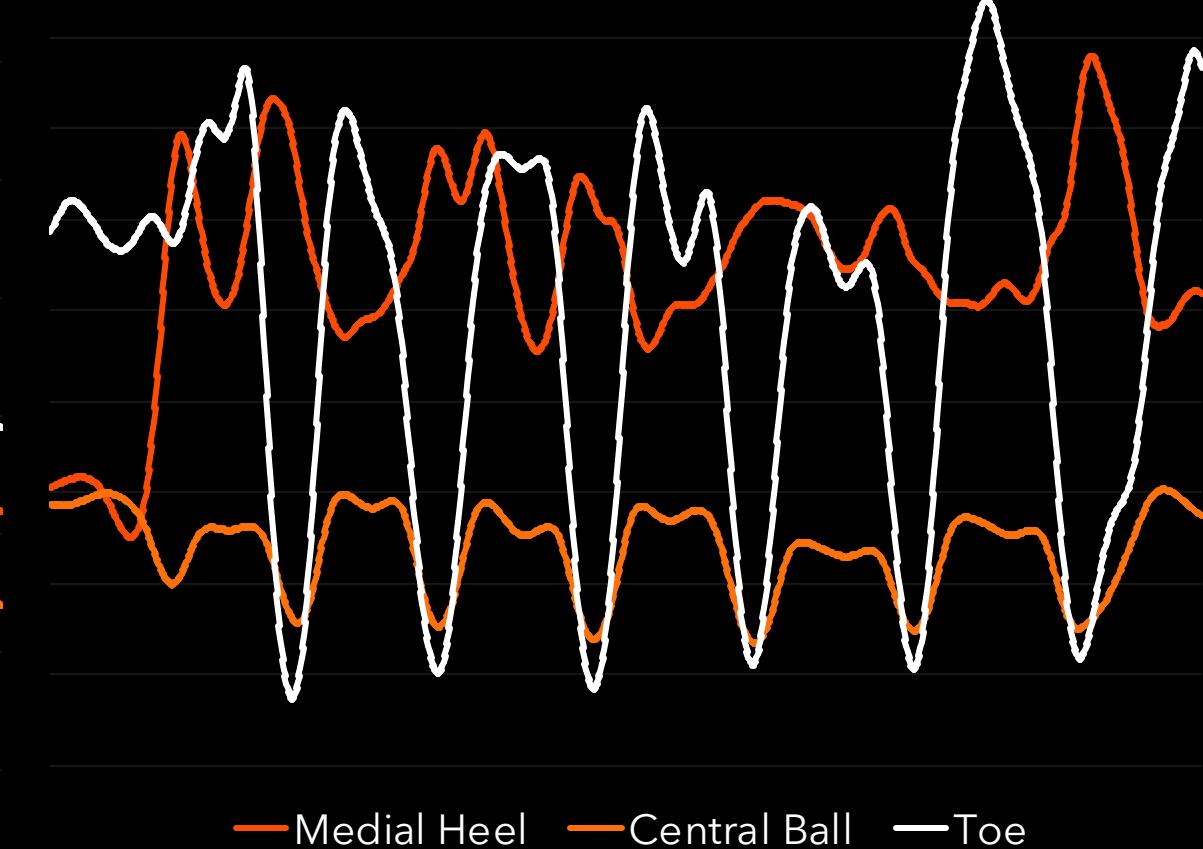
NORMAL WALKING

PRESSURE ON ALL SENSORS



LIMPING - INJURED

MORE PRESSURE ON TOE AND BALL SENSORS -
LESS PRESSURE ON HEEL SENSOR



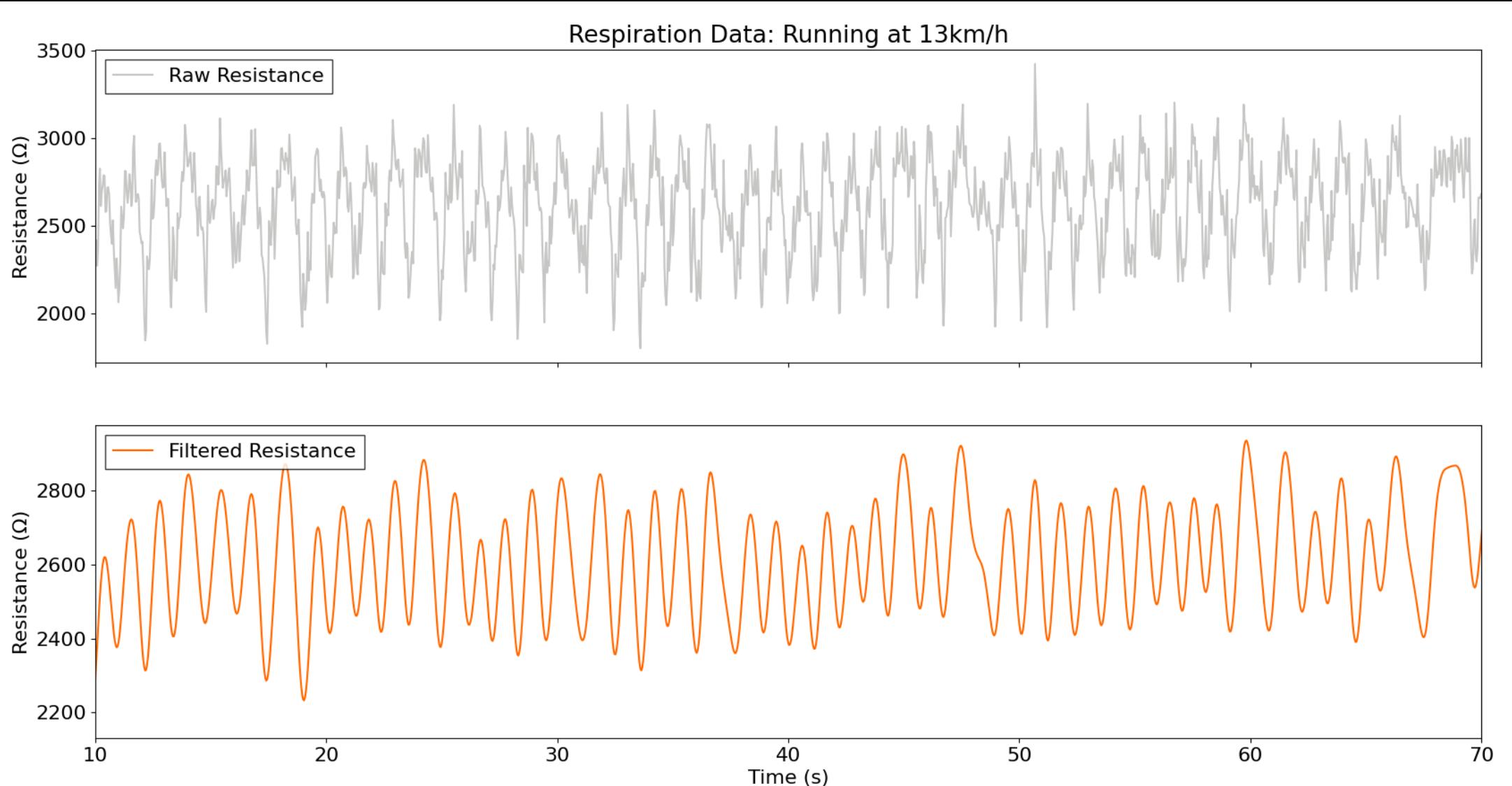
HIGH PRESSURE = FOOT ON GROUND
LOW PRESSURE = FOOT OFF GROUND

Respiration Rate Analysis



- NO WEARABLES
- NO HASSLE
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- Machine washable
- Data sent directly to caregivers or clinicians

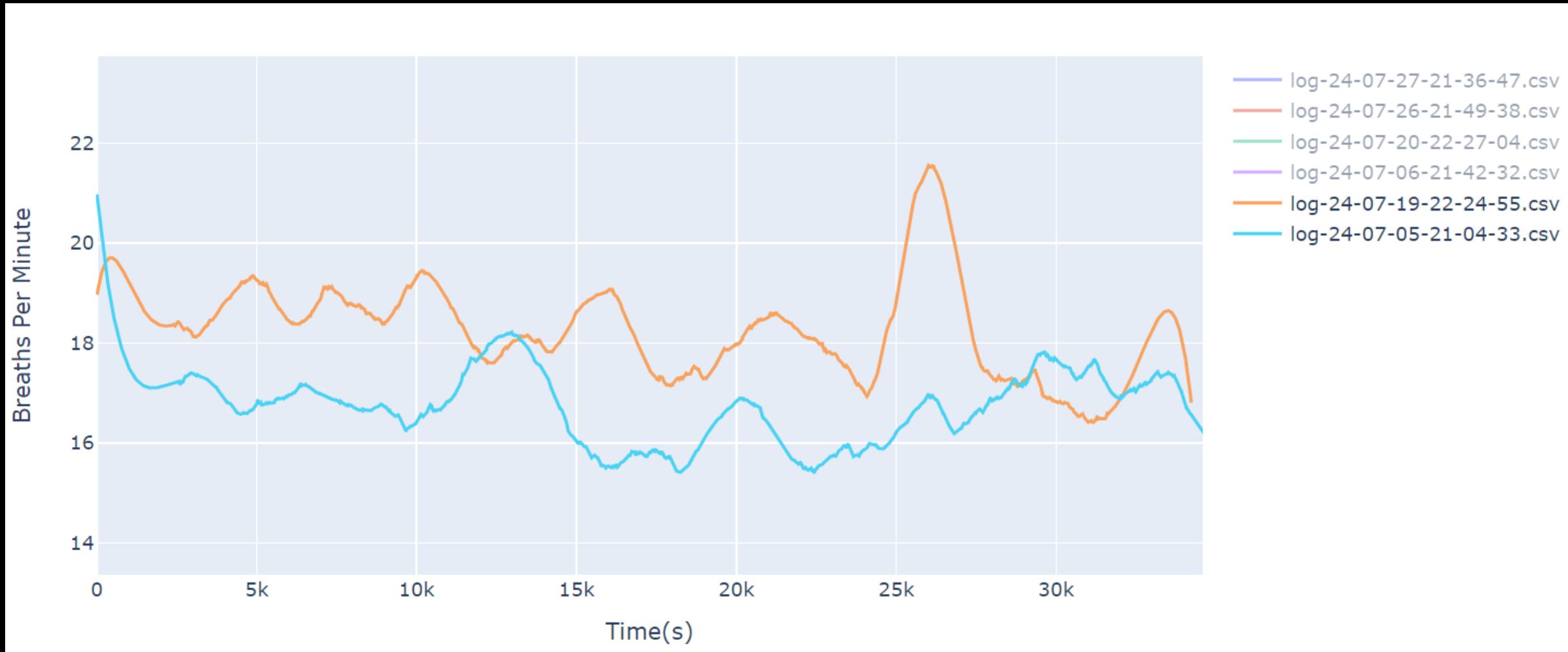
RESPIRATION RATE DURING RUNNING



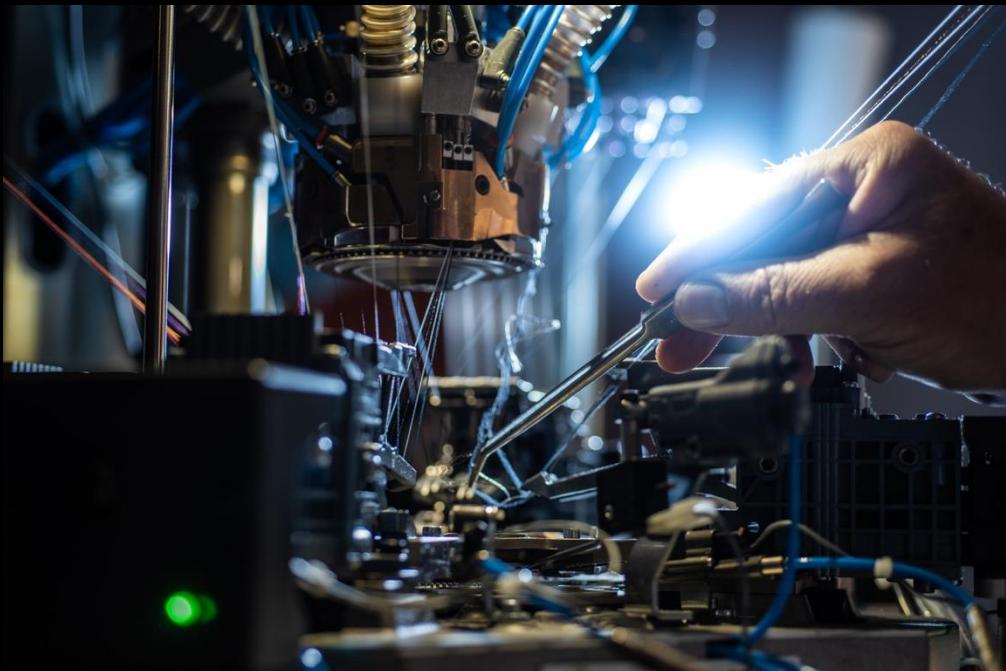
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RESPIRATION RATE DURING SLEEP

COMPARING BREATHING PATTERNS OVER TWO NIGHTS SLEEP



WHAT WE DO



- **Understand** - Your problem and need.
- **Concept** - Your idea with our input.
- **Create** - A proof of concept to bring your idea to life.
- **Build** - Your product into **the** market leader.
- **Develop** - A product to show off your idea to the world

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