



PIGSPIES



Automated behavioral monitoring for improved animal welfare in experimental animal research

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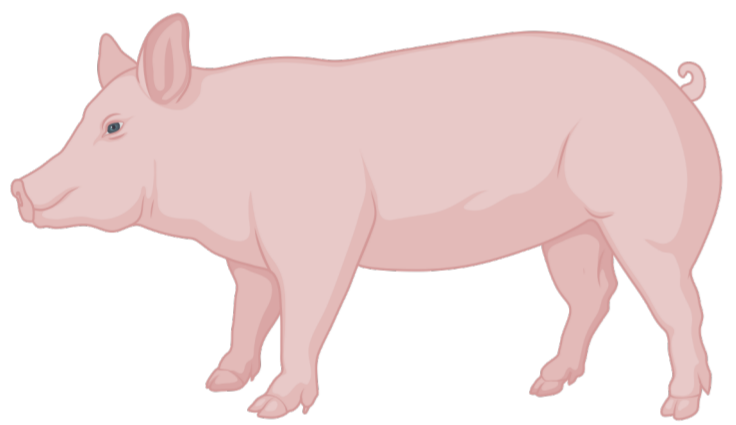
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Background

- **23 000 pigs** for experimental research yearly in Denmark
- **Animal welfare** should always be of **highest priority** in experimental animal research
- Experimental animals live **unobserved** for up to **14 hours** each day
- Physical observation methods of the pigs are both **time consuming** and **subjective**
- **Acute complications** and gradual changes could go **unnoticed**

Objectives

Primary



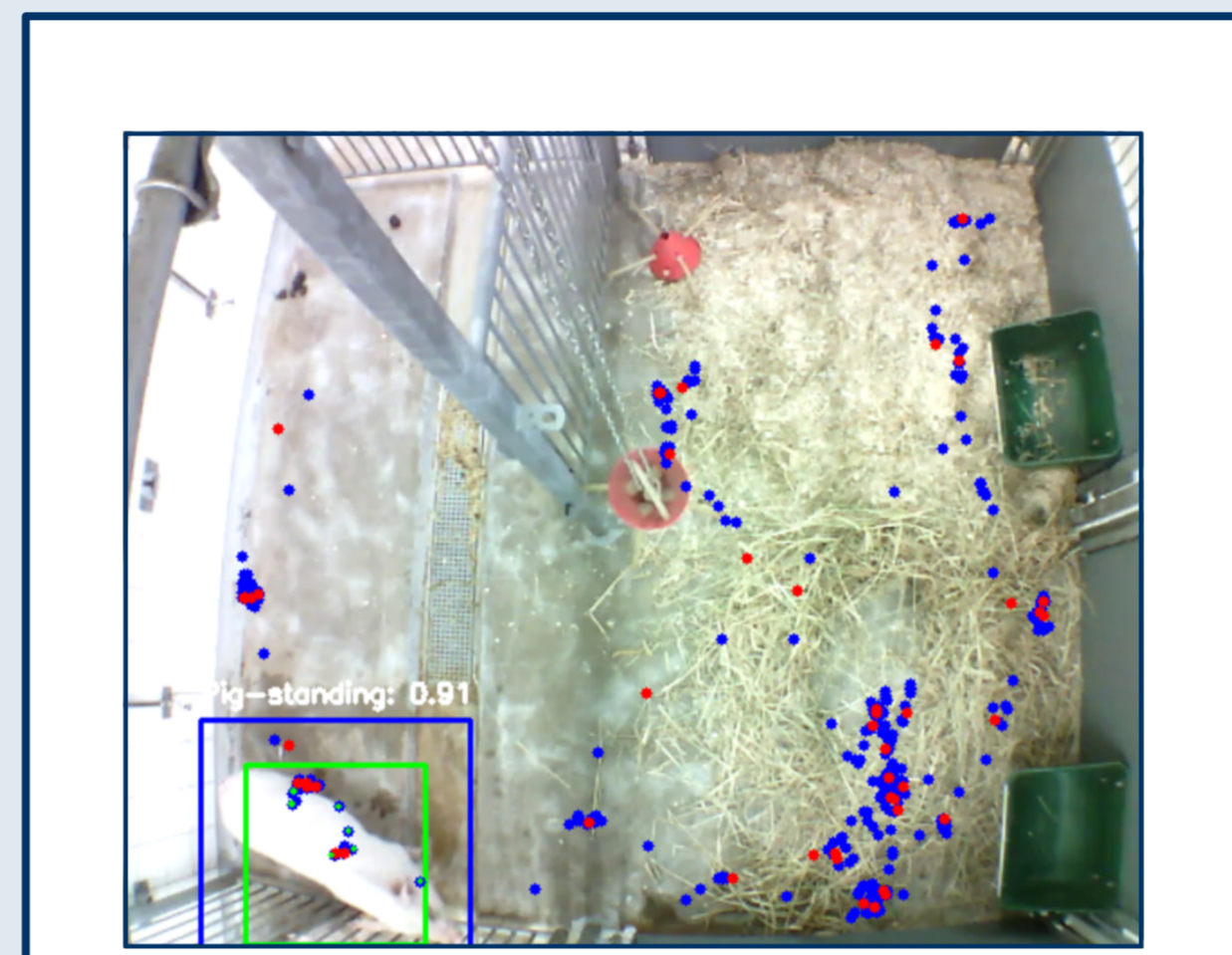
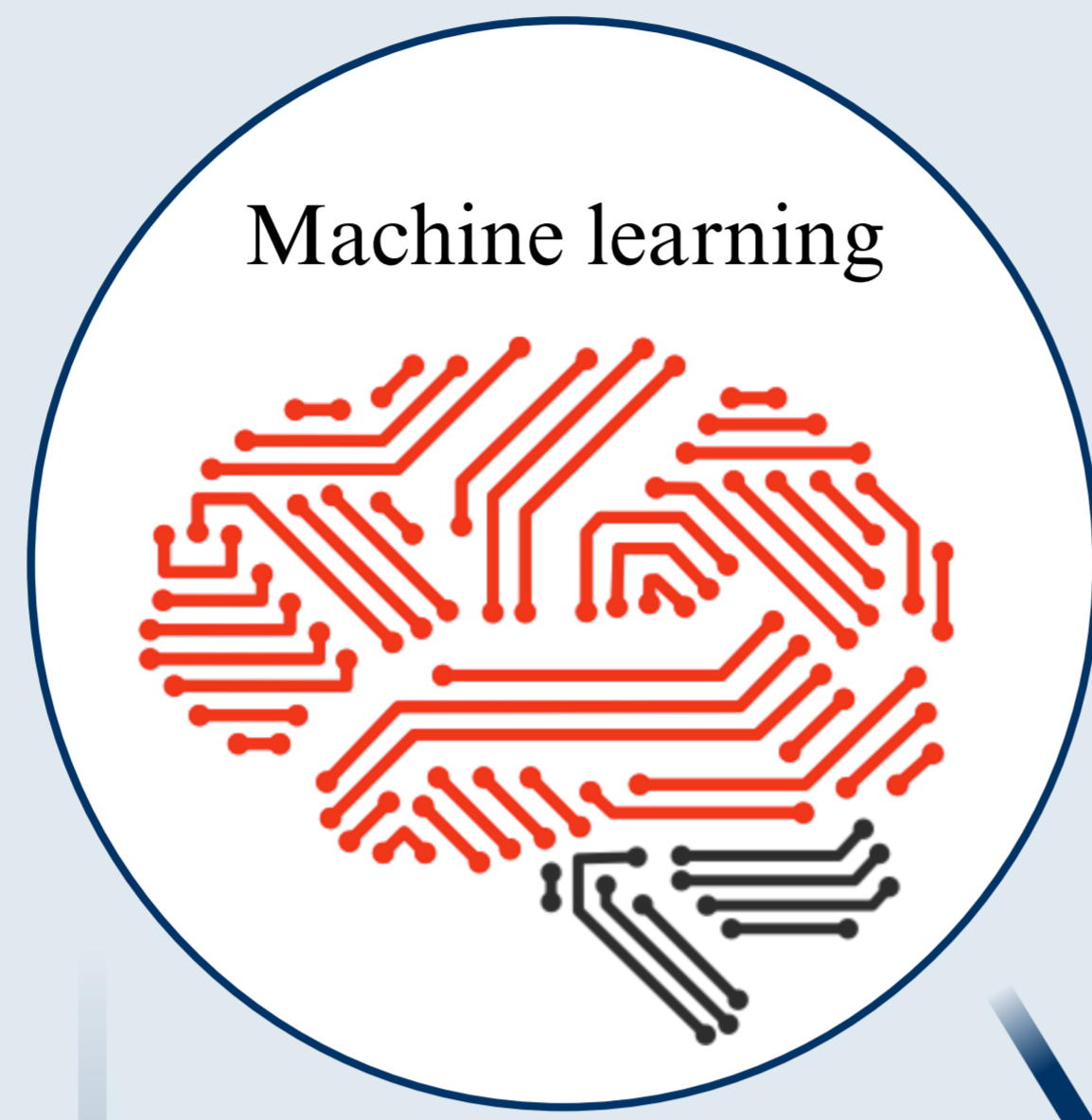
Develop observation model

Secondary



Detect misthrieve or discomfort

Methods



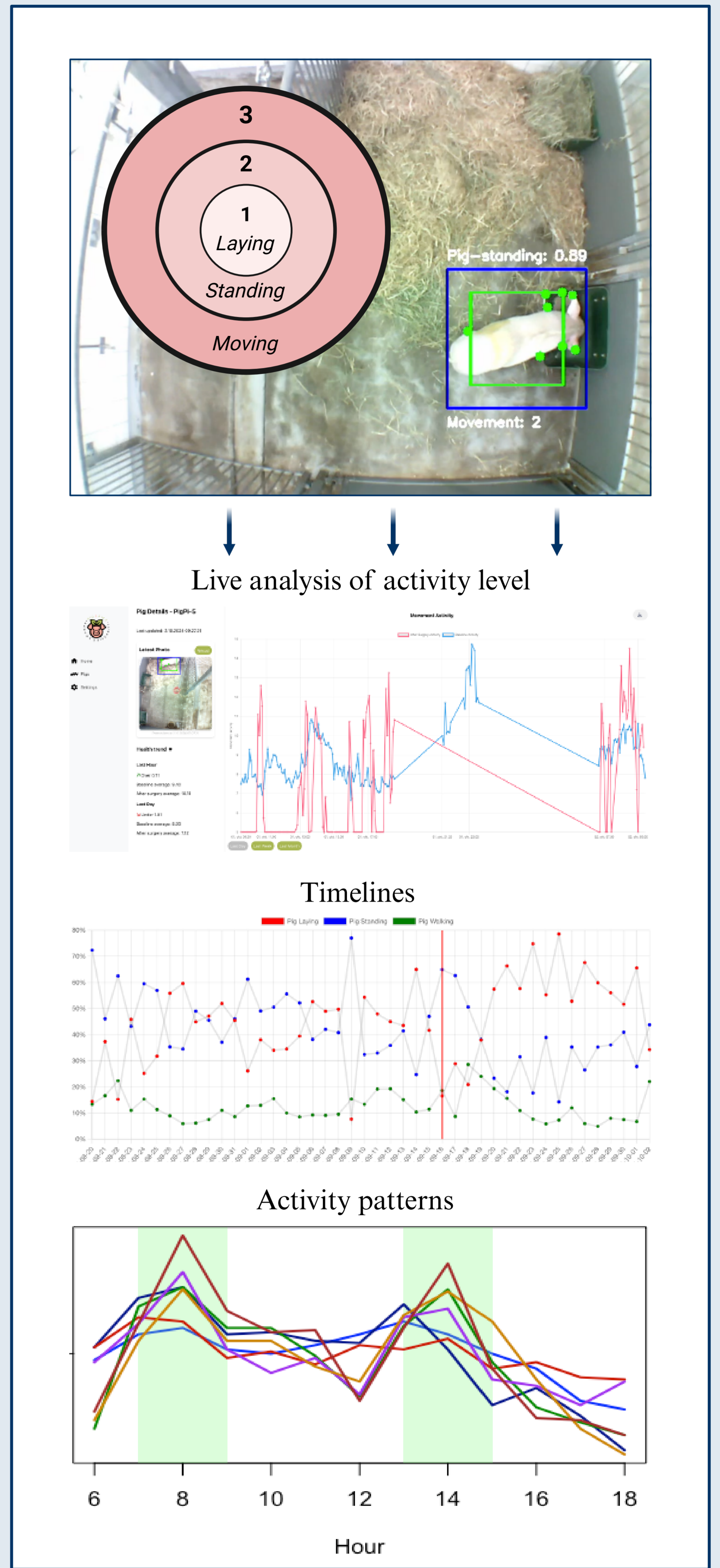
Drinking



Defecation

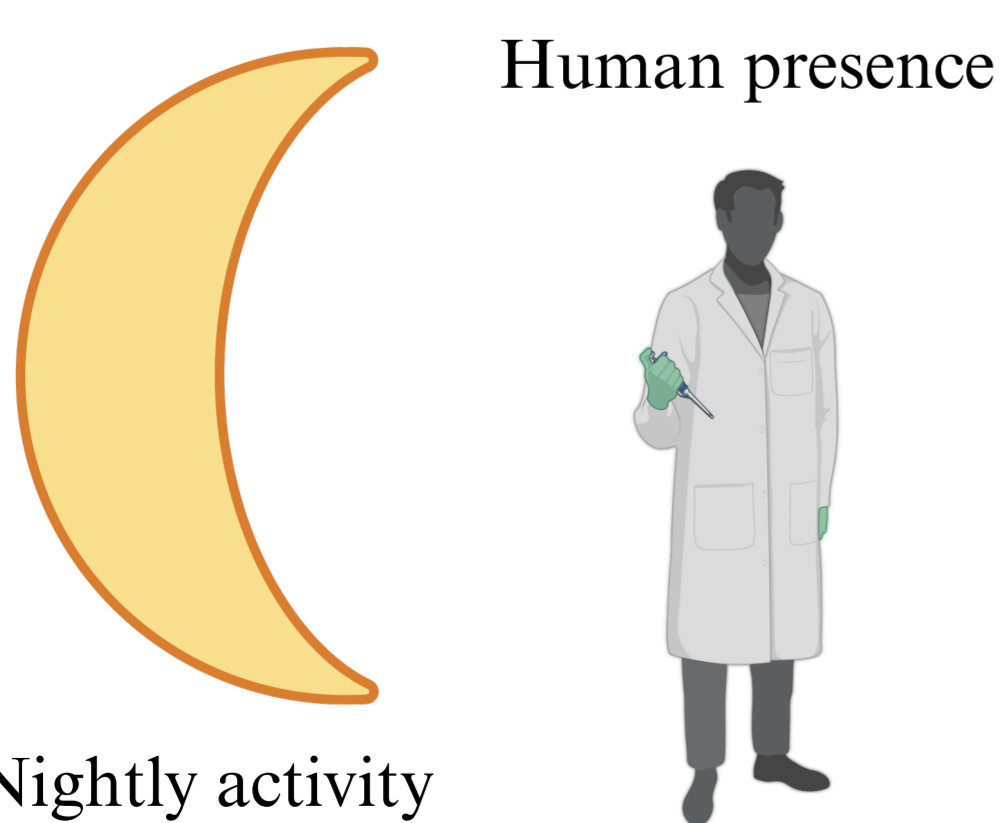


Urination

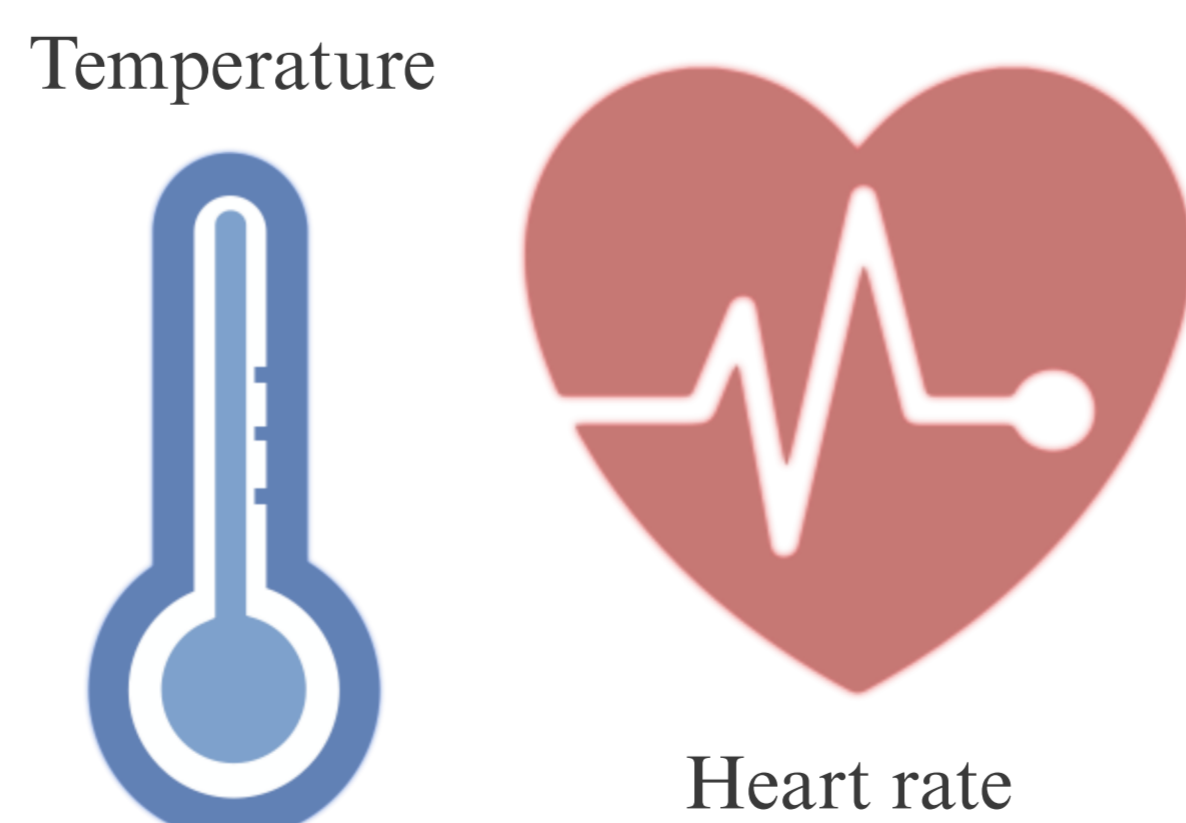


Future work and perspective

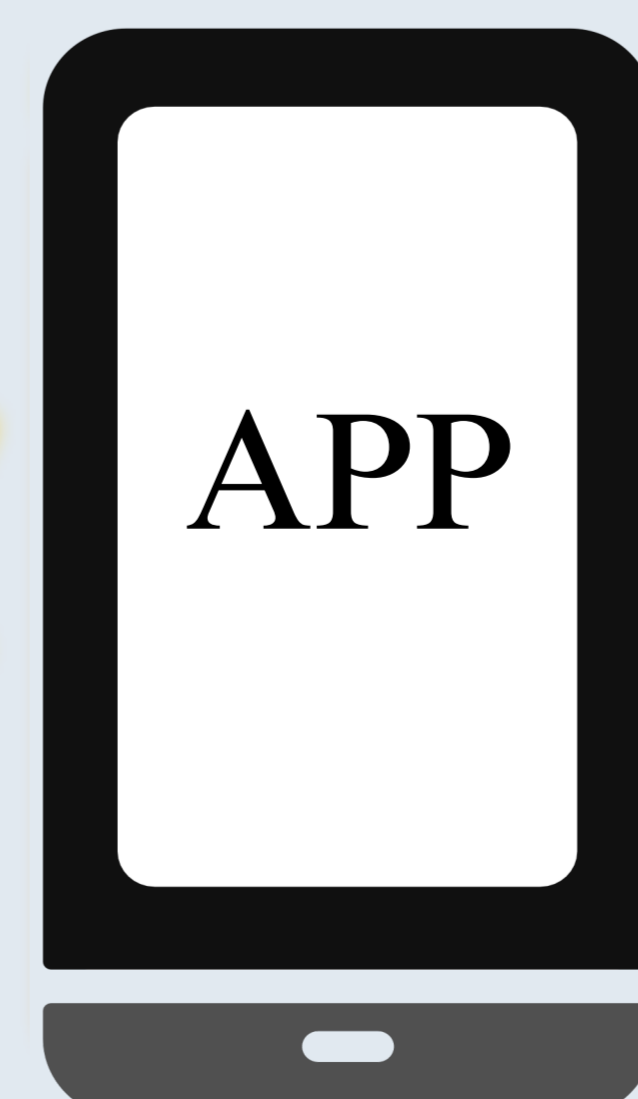
Infrared sensors



Thermal sensors



Early warning system



- **Faster detection** of misthrieve or complications
- **Supplement** or **replace** in-person observations
- **Refinement** of future animal experiments
- **Heightens** animal welfare