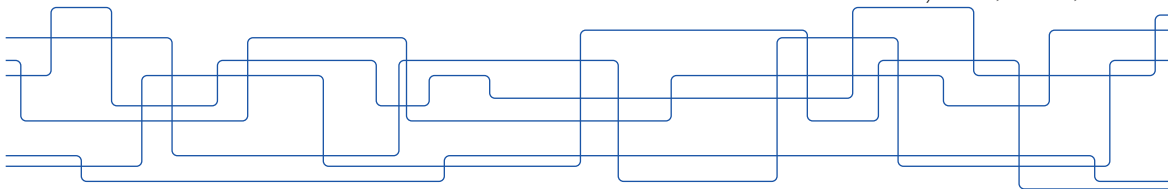# EdgeDroid

An Experimental Approach to Benchmarking Human-in-the-Loop Applications

M. Olguín Muñoz[†], J. Wang[‡], M. Satyanarayanan[‡] and J. Gross[†]
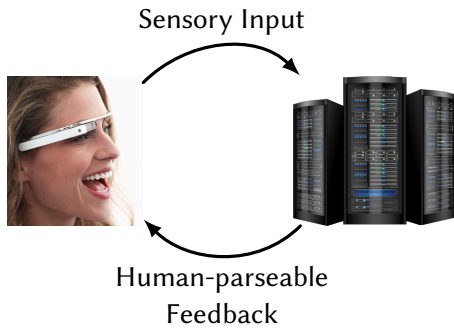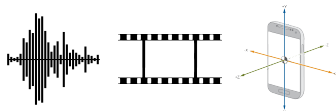
[†] KTH Royal Institute of Technology
[‡] Carnegie Mellon University

Outline

- Introduction & Background

- Experimentally Benchmarking Human-in-the-Loop
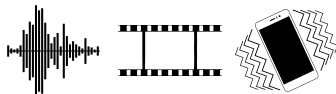
- Conclusions

Outline

Sensory Input

Human-parseable
Feedback
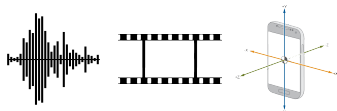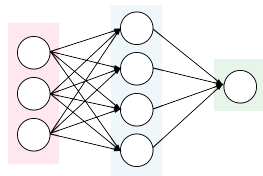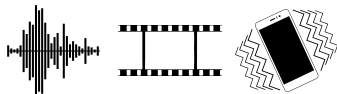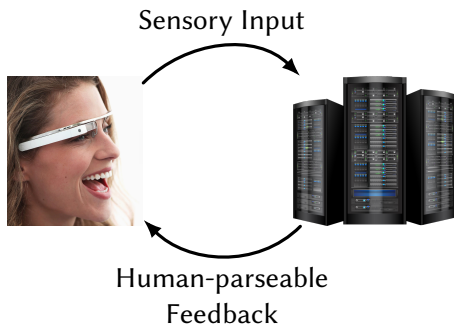
Sensory Input

Human-parseable
Feedback

Sensory Input

Human-parseable
Feedback

The Problem

Benchmarking human-in-the-loop applications is HARD

Outline

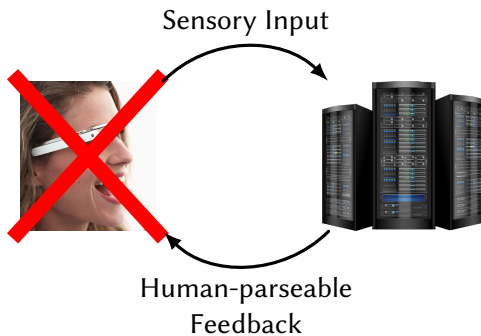# Approach: Motivation

Sensory Input

Human-parseable
Feedback

Approach: Motivation

Sensory Input

Human-parseable
Feedback

What if we could do away with the human user?

Approach: Motivation

Sensory Input

Human-parseable
Feedback
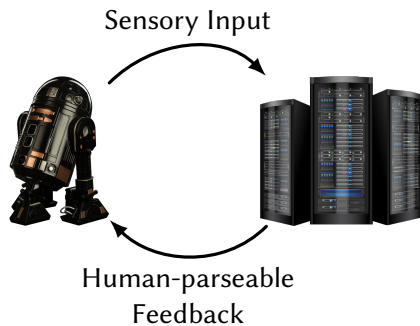
What if we could do away with the human user?

EdgeDroid: Idea

- ▶ Generate realistic, real-time inputs.
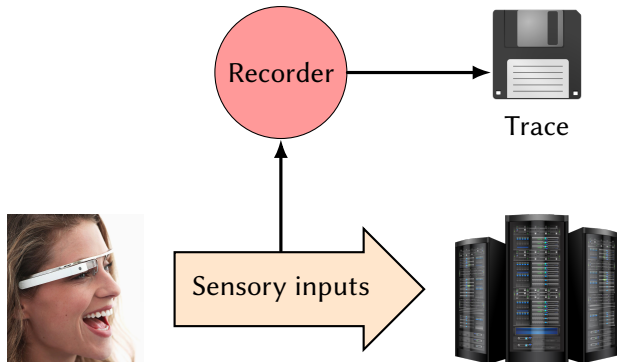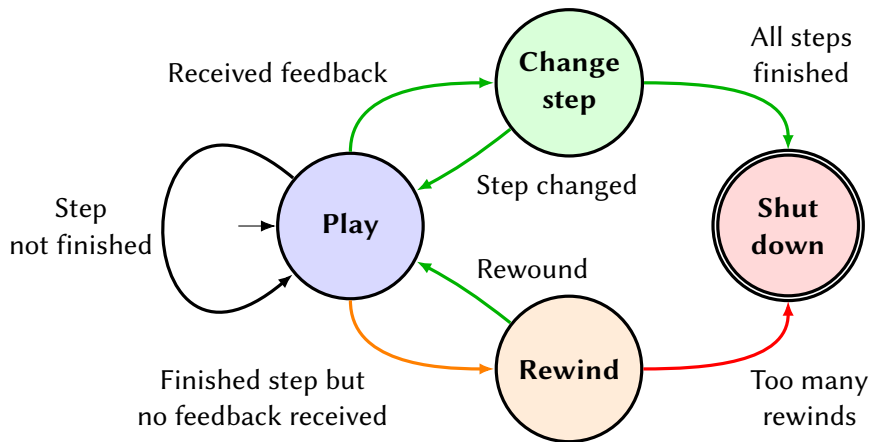
- ▶ Correctly react to feedback.

EdgeDroid: Idea

- ► Generate realistic, real-time inputs.
  - ► Trace of human-generated inputs.

- ► Correctly react to feedback.
  - ► Model of human interaction.

EdgeDroid: Tracing

EdgeDroid: User Model

Implementation

Evaluation

Outline

Thank you!

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