**Artificial Conscience**

**Team “Fight the Inner Couch Potato”**

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## What Is Artificial Conscience?

Our system supports users to achieve a healthy lifestyle by giving recommendations for everyday life:

- Suggesting context-dependent exercises
- Reminding oneself of personal goals
- Applying techniques to improve productivity

The idea is to target the inner couch potato: Users will probably feel guilty if they do not follow “their own” advice.

**Key aspect: Privacy Speakers**

- Audio less likely to be missed
- No privacy concerns
- Not embarrassing in public

## How Does It Work?

1. **Record IMU data of activities or gestures**
2. **Create and train model for activity recognition**
3. **Use model to predict activity, gesture, or situation**
4. **Play reminder via privacy speakers**

Challenge: classify timeseries data with variable length using Shallow Classifiers (e.g. kNN, SVM) or Deep Learning approaches (e.g. LSTM)

**Comparing rewards:**

- Sound
- Message
- Gamification

**Which Voice To Use?**

1. Artificial voice (e.g. Alexa, Siri, or Google Assistant)
2. Your own voice (making a promise to oneself)
3. Friend’s voice (sending virtual cheers)
4. Celebrity’s voice (e.g. interview snippets and/or GANs)

**Comparing rewards:**

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**What Are The Use Cases?**

Our framework can be used for activities to stay healthy (as well as for gestures to operate the Huawei eyewear):

- Gestures (e.g. nodding="yes", shaking head="no")
- Daily physical activity (e.g. elevator vs. stairs)
- Self-Reminders (e.g. habits)
- Neck posture and exercises (e.g. rotate head, stretching left/right/front)
- Focus assist (e.g. Pomodoro timer)
- Hydration check (drinking reminder)

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**Source:** https://consumer.huawei.com/en/wearables/huawei-eyewear/

**Our framework as open source contribution:**

https://github.com/jokeppel/artificial_conscience_mobileHCI22SDC

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