



Promoting well-being through Augmented Reality Sensing Based Technology

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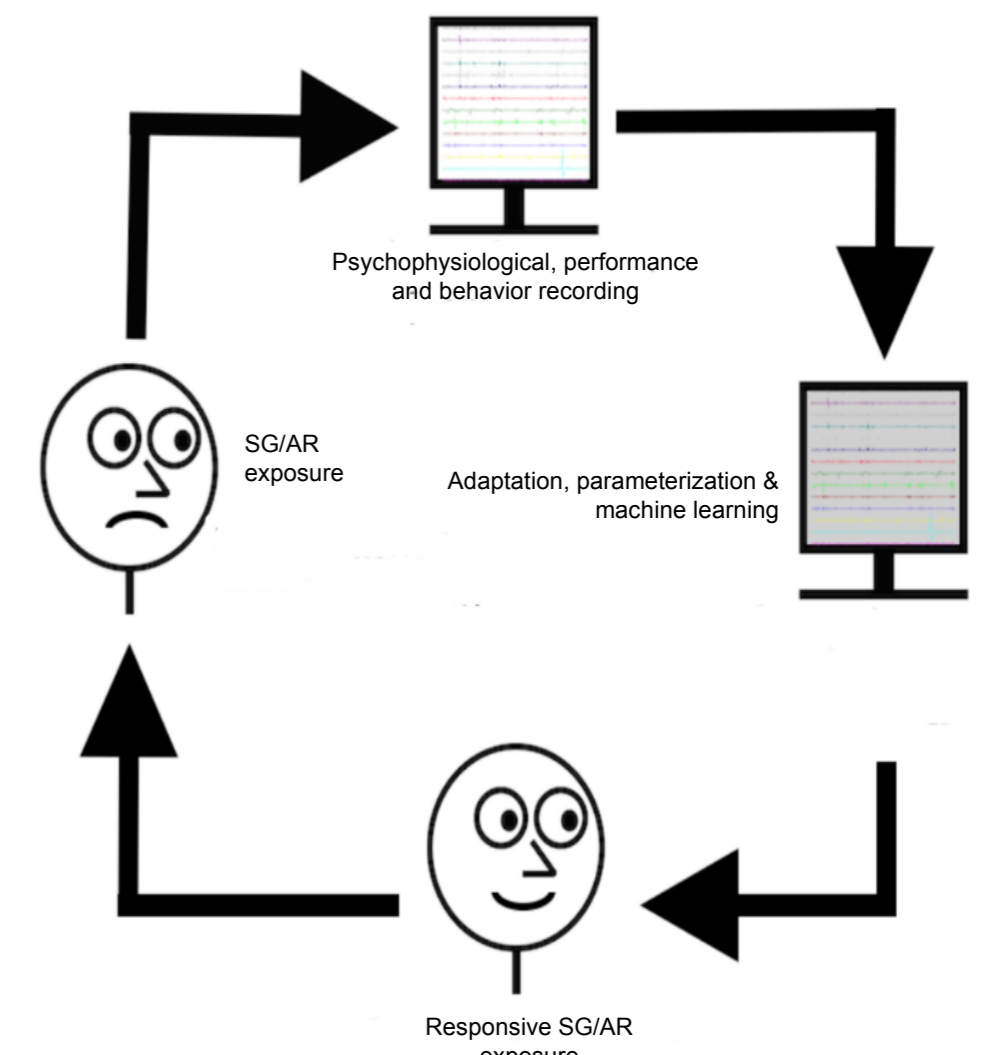
Topics

- Well-being is linked to anxiety and phobia disorders.
- Applying routinely exercises in exposing therapy, may help improve anxiety levels.
- User Modelling in SG/AR may be used for cognitive-behavioural anxiety treatment.

State-of-the-Art

Augmented Reality & Sensing Technologies as part of Adaptive Systems, have been contributing to the psychology field:

- Cyber therapy.
- Serious Games for cognitive intervention.
- m-Health.



Innovation

- Non-intrusive, smart data tracking
- Decentralized / Scalable / Portable solution
- Self Learning System Throughout Sessions.
- Touch and feel sensation during interaction.
- Historical data analysis from previous sessions.

Objetives

- On-the-Fly classification of a therapy session context.
 - In-Depth inference, based on learnt history of abnormal behaviors (trigger events based on predefined thresholds).
 - Health improvement, based on exposure therapy approach.
- Enhance the quality of captured data for analysis.

Main outcomes

- Highly responsive SG/AR scenarios for both behavioural and psychophysiological inputs.
- Automatic adjustments in task difficulty and characteristics.
- Increased effectiveness due to the integration of machine learning algorithms.
- In-home and personalized care

Challenges

- Idiosyncrasies associated with certain types of disorders, such as patients with mental illness.
- Precision problems of the outcomes of SG/AR therapy.
- Integration of both behavioural and psychophysiological responses in the AR system.

Technical architecture

