Advanced Topics in Human Computer Interaction

Guest Lecture

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Who am I?

BSc in ICT (Hons)

Researcher

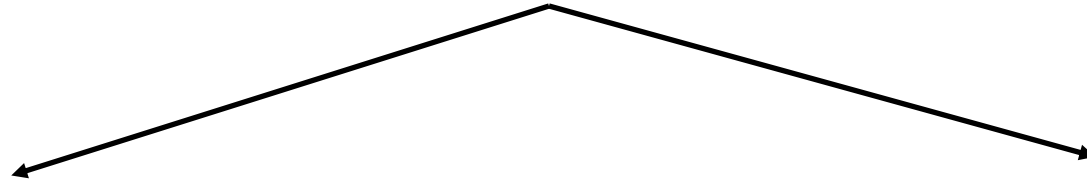**PhD in Information Technology**

Research Fellow

What will we discuss today?

- Personalisation

- Role of personalisation in digital mental health interventions

- How it has been applied to the companion agent we are developing

HCI research

Technology-Centric

Technological breakthroughs to enhance user interfaces

E.g., AR/VR, Haptic Interfaces and Augmentation, etc.

Human-Centric

Research focuses on understanding human psychology and behavior to create more adaptive and user-friendly systems

E.g., Personalisation, Behavioural Computing, etc.
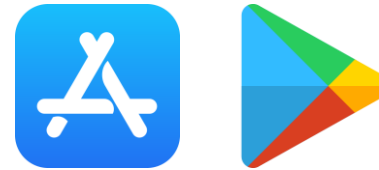
What is personalisation?

Personalisation is the process that changes the functionality, interface, information content, or distinctiveness of a system to increase its personal relevance to the individual.

What are some examples of personalisation you've noticed on apps on your phone?

Entertainment

App recommendations

Shopping/e-commerce

Health and fitness

Personalisation in Digital Mental Health Interventions

- Digital Mental Health Intervention (DMHI) - **technology-based tools**, such as apps, websites, or programs, designed to **support mental health**.

- Importance of personalisation in DMHI
  - Increased Engagement
  - Improved Adherence
  - Enhanced User Experience
  - Better Outcomes

Contd.

Personalisation in DMHIs

What elements have been personalised?

Personalisation Dimensions

Through what methods/mechanisms has personalisation been implemented?

Personalisation Mechanisms

Personalisation Dimensions

Content   Order   Guidance   Communication   Interface   Interactivity

Personalisation Mechanisms

User choice
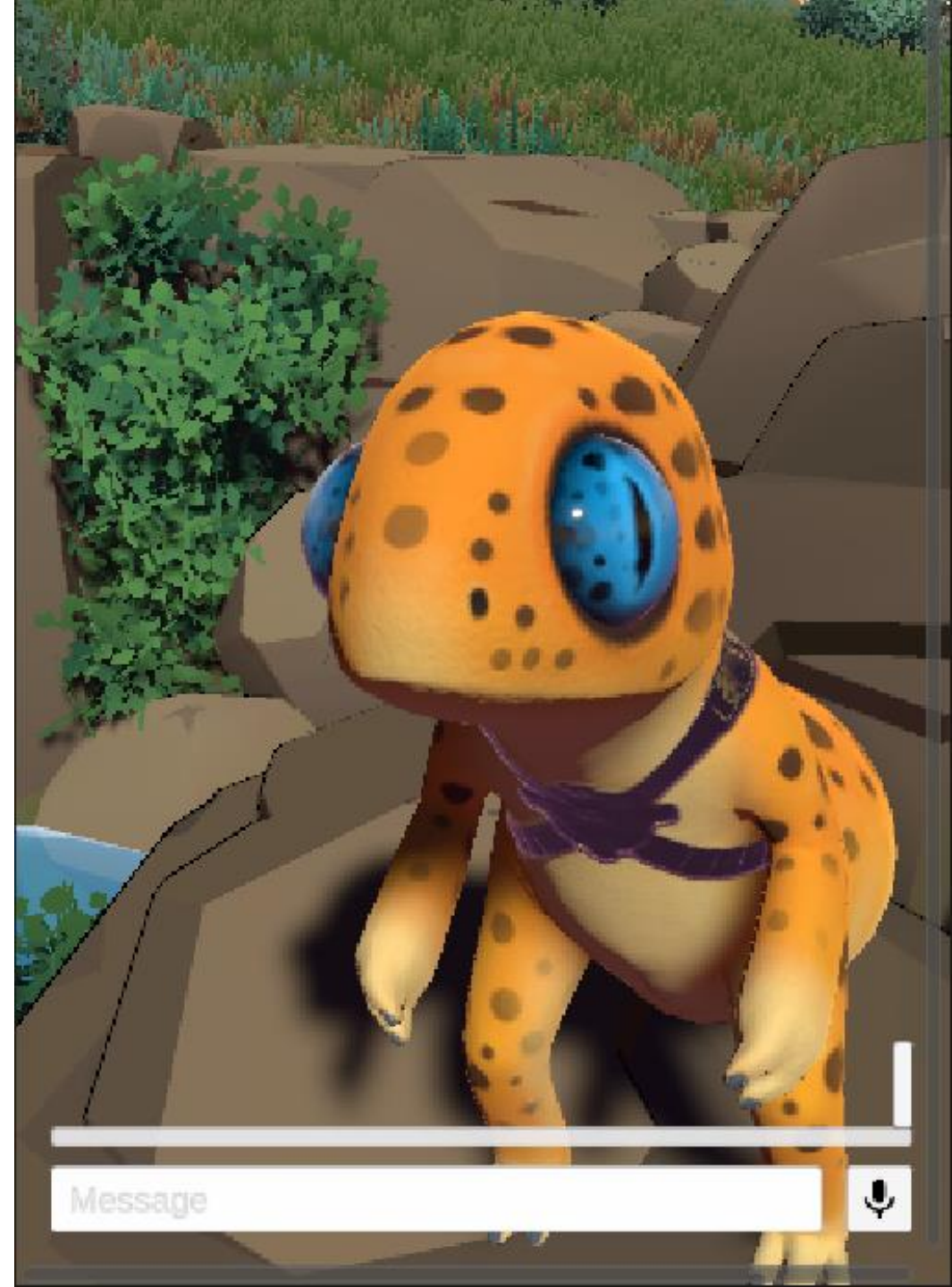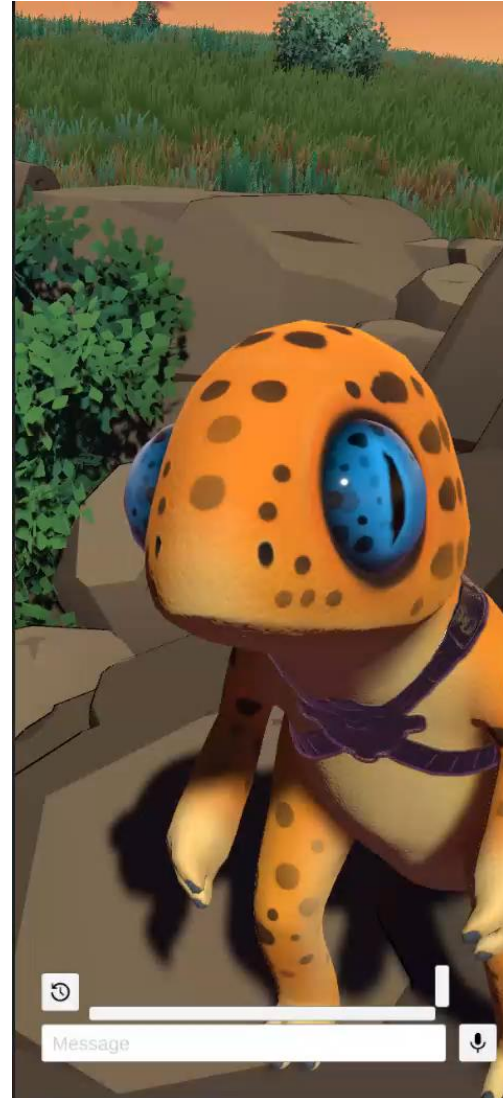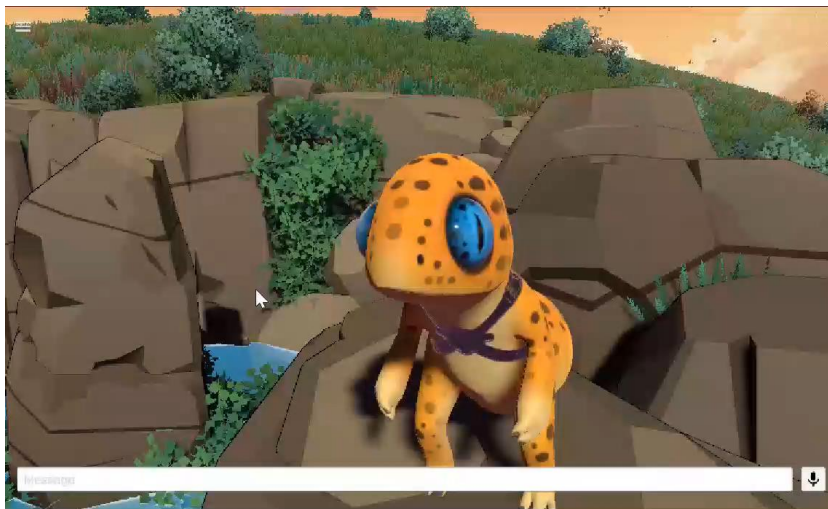

Provider choice

Rule-based

Machine learning

Our Companion Agent: Mango

- The research problem

- Why 'Mango'?

- What 'Mango' can do?

Personalising Mango
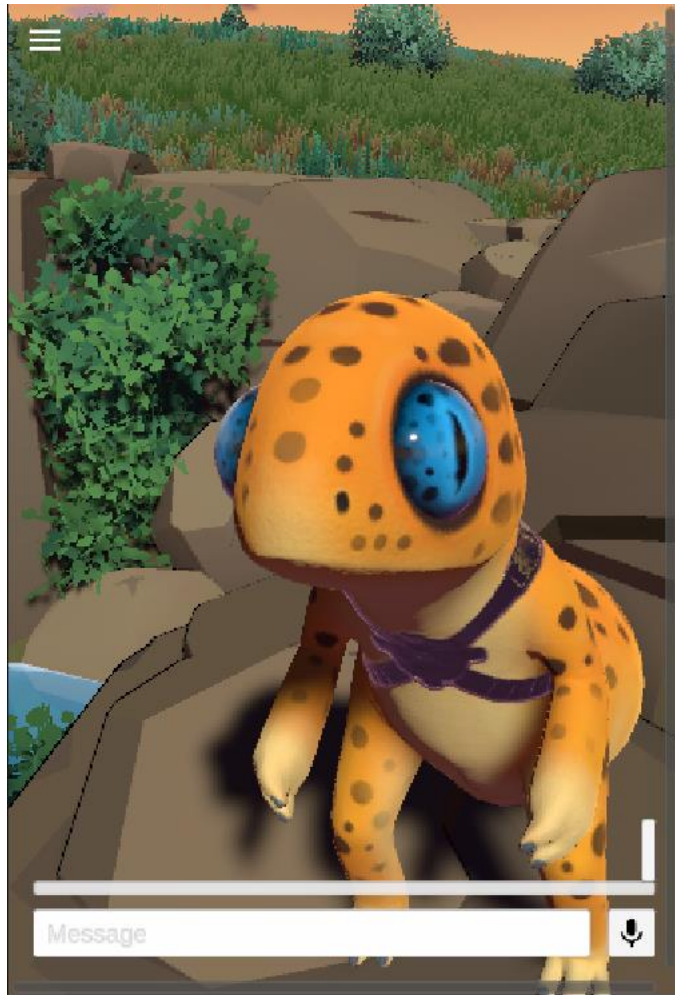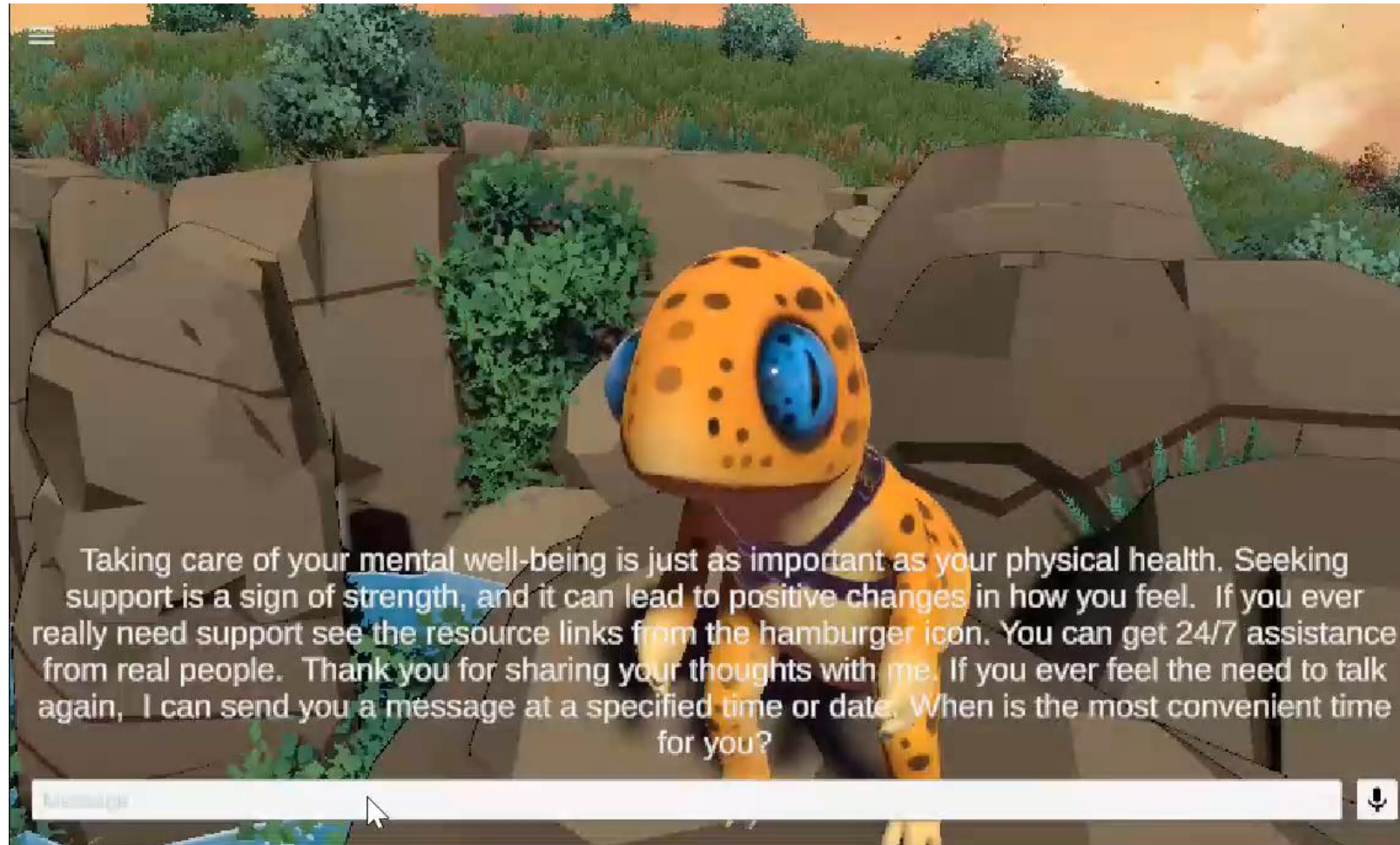

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Personalising Mango Contd.

Personalising Mango Contd.

Personalising Mango Contd.

- Motivational content/Feature introduction based on WHO-5

- What is WHO-5?
  - Felt cheerful in good spirits?
  - Felt calm and relaxed?
  - Felt active and vigorous?
  - Woke up feeling fresh and rested?
  - Daily life has been filled with things that interest me?

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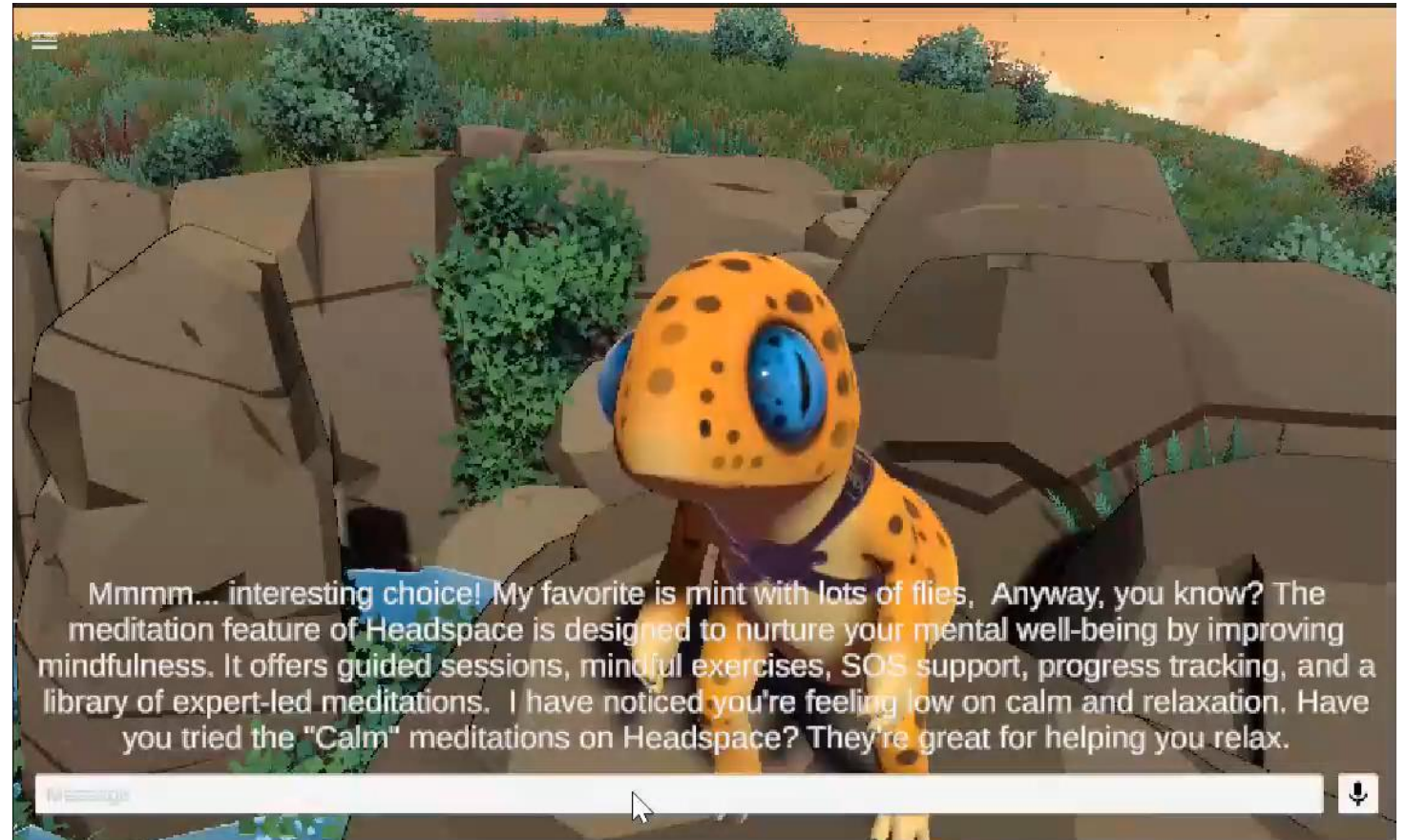
Continuing personalisation of Mango with Schwartz's theory of basic values

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Thank you!