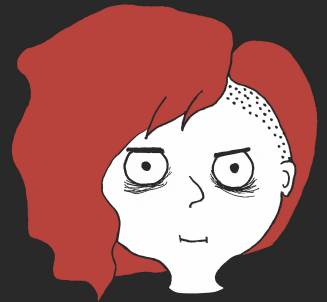


# Emotional Engagement

Through Alternative Controllers and Artificial  
Intelligence



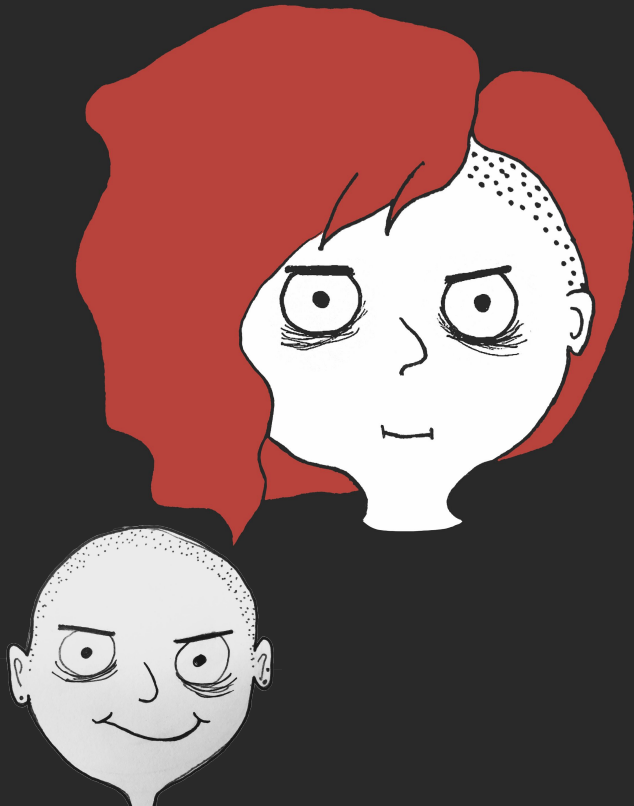


**Ready?**



hi

# WHO AM I?



Malena Klaus

@dasmalle



www

# SEA OF SOLITUDE



# Outline

1. What are emotions and why do we care?
2. Alternative controllers and the possibilities
3. The Teddy Controller
4. AI and the possibilities
5. The Future

# Emotion





*Emotion is essential to learning. It is literally  
neurobiological impossible to think deeply  
about things you don't care about*

*Dr. Immordino-Yang*

# Emotional Process

- Dynamic process
- has a beginning and an end
- Is of relatively brief duration
- Affects:
  - Feeling
  - Neurophysiological response patterns
  - Motor expression

# Which function do emotions have?

- quasi-automatic response mechanism
- influenced by feelings
- decouple stimuli-response chains
- allow selection between multiple reactions
- “fail safe” with prepared action tendency
- helps to process information quickly

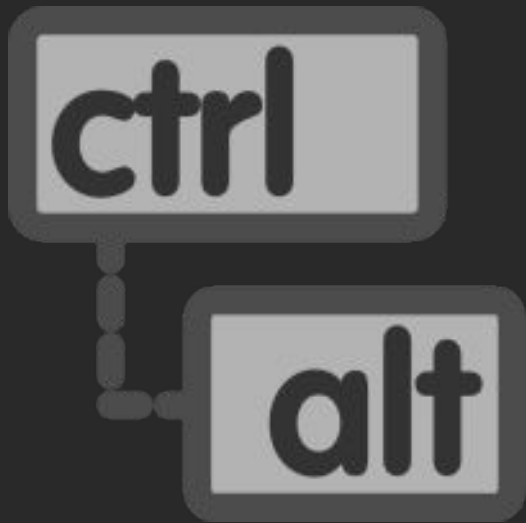
# Feelings

- reflection mechanism
- integrates all components of the emotional state
- consequence, not cause
- mediates between motivation, behavior and cognition

A woman with dark hair tied back, wearing a yellow tank top with a white and black soccer ball graphic on the chest. She is smiling and looking slightly to the right. Her hands are clasped in front of her.

**Alt Ctrl.**

# Alternative Controllers



- Designed to let us play differently
- Whole body experiences
- New experiences that regular controllers can't provide
- Remove mental design constraints

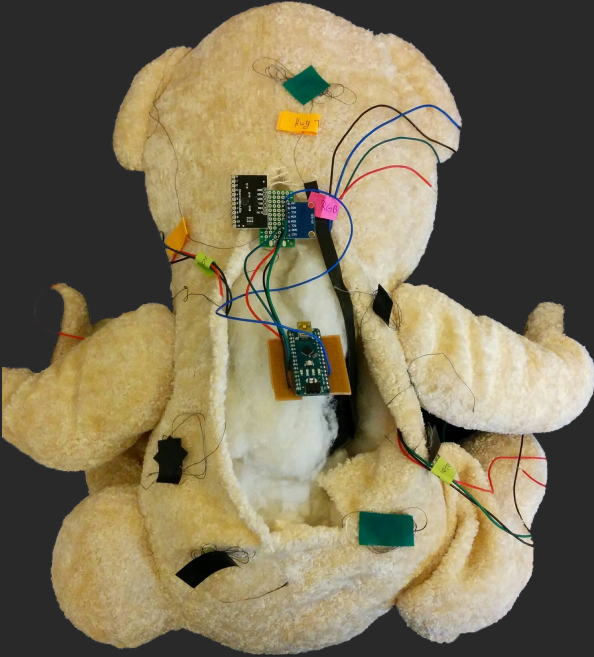




What did I do?



# Teddy Controller



- Recognised as HID
- Various sensors
- RGB led & vibration output
- Completely soft

# Playtests

- capacitive touch
- asteroids clone
- “choke the bear”
- disconnect between controller and game
- input processing slow



# Playtests

- pressure sensor
- vibration feedback
- led
- teddy representation in game









# Learnings

- People get attached
- Shapes context
- Player Expectations
- Emotional connections need time
- Direct Input feedback necessary
- Strong opinions on how to treat the bear



# Learnings Hardware

- 20 h per bear
- hardware cost 35 \$
- 3-6 weeks delivery times
- conductive fabric hard to get
- Difficult to industrialize due to soft electronics
- potentially fire hazard



But there is hope...



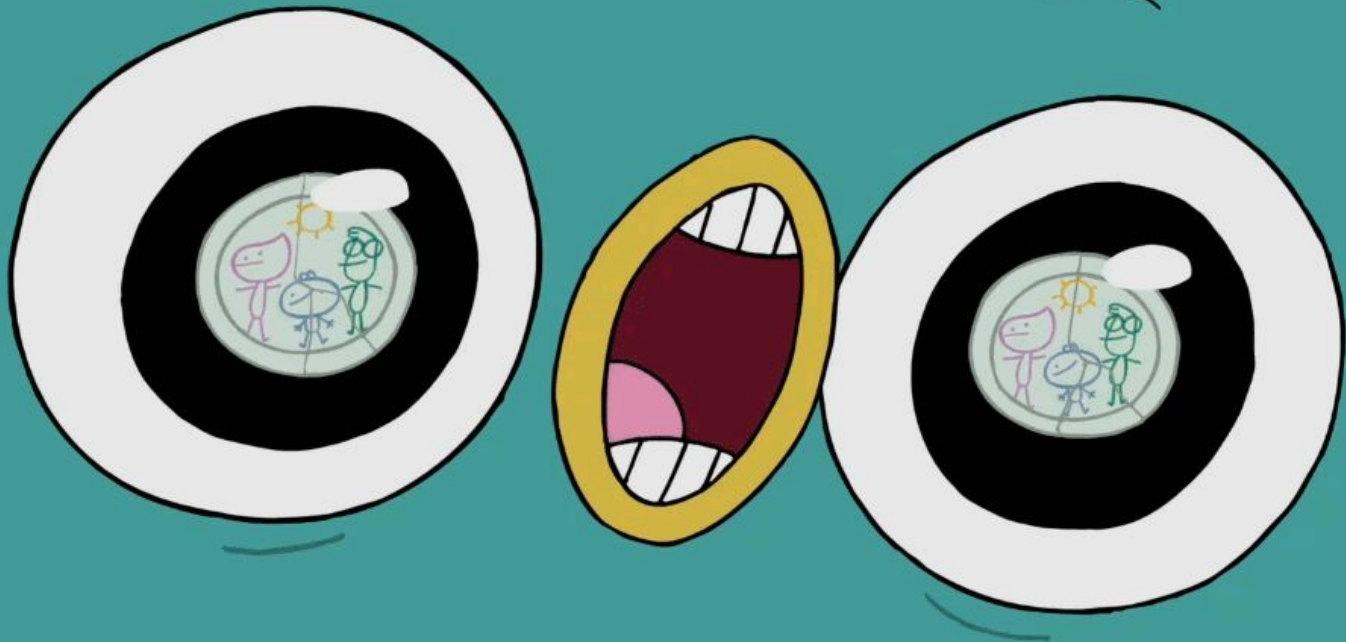


Use what you have...



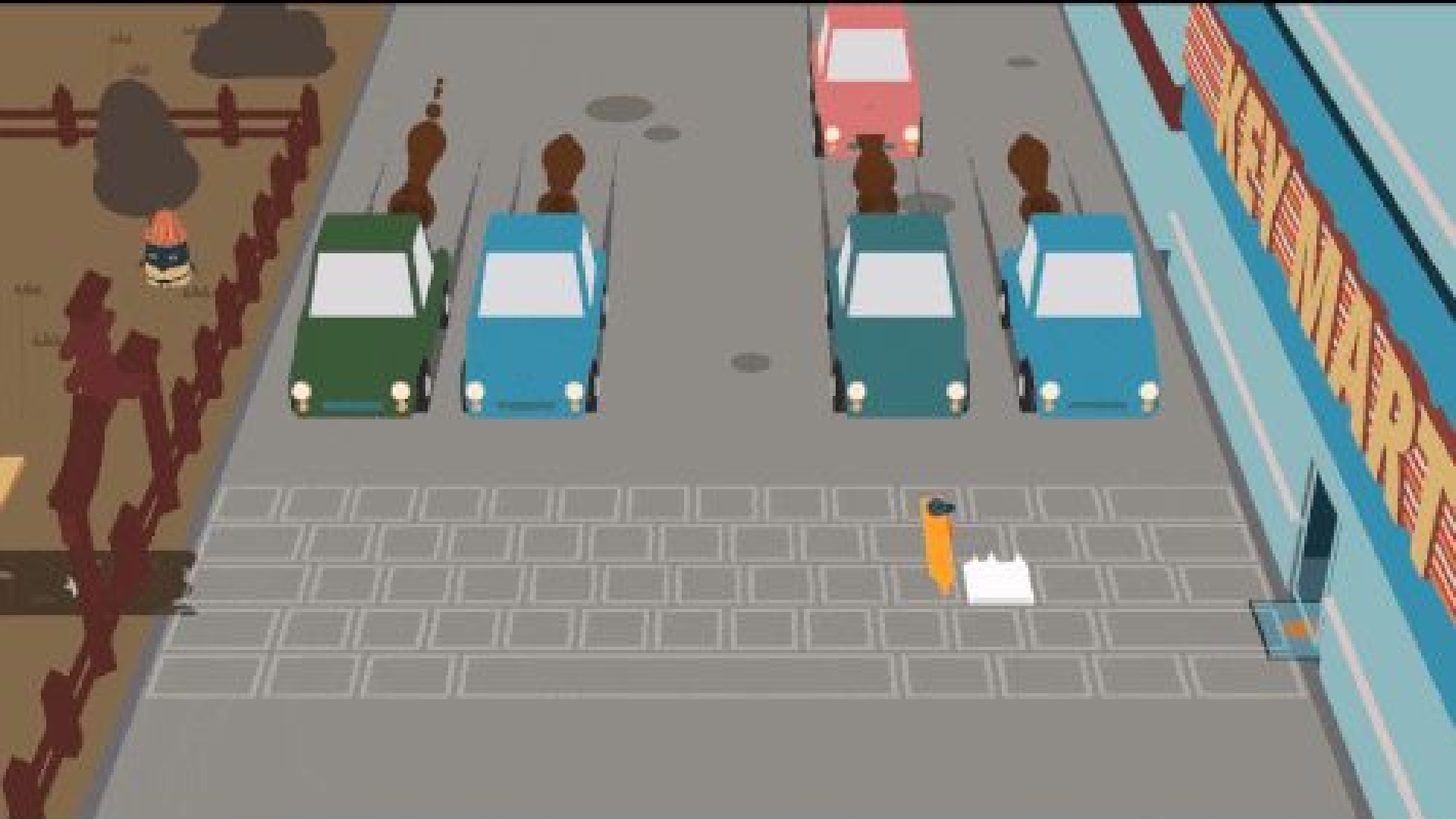
...but in a different way!

# Great Examples



# GAMEPLAY









# Artificial Intelligence

A humanoid robot with a blue and silver body is standing in a white doorway. The robot has a boxy head, articulated arms, and a torso with various sensors and components visible. It is positioned in the center of the frame, facing forward. The background consists of a brick wall and a wooden slat fence. To the right, a person in a blue uniform and white hard hat is partially visible, standing near a red barrier. The ground is paved with yellow lines.

14:00 05/06/2015 UTC

# Artificial Intelligence



- As Input
  - Voice
  - Emotion
  - Sentiment
- As NPC's
- Adjustable difficulty





# Chatbots

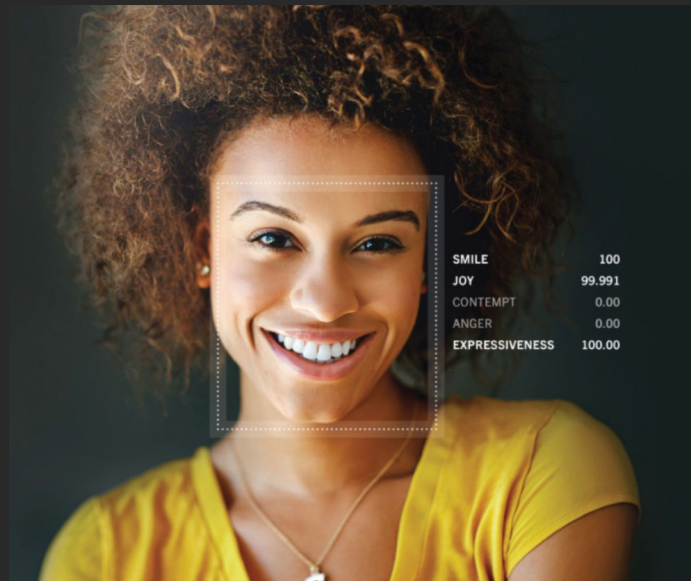
*Clev: Why do you want to know my name?*

*User: So I can let someone murder you.*

*Clev: Okay then. My name is Molly.*

# Facial Emotion Detection

- no sensors needed
- glasses, beards & accessories problematic
- computational intense
- “resting impression often wrong”
- referencing facial expression can be connecting or uncanny



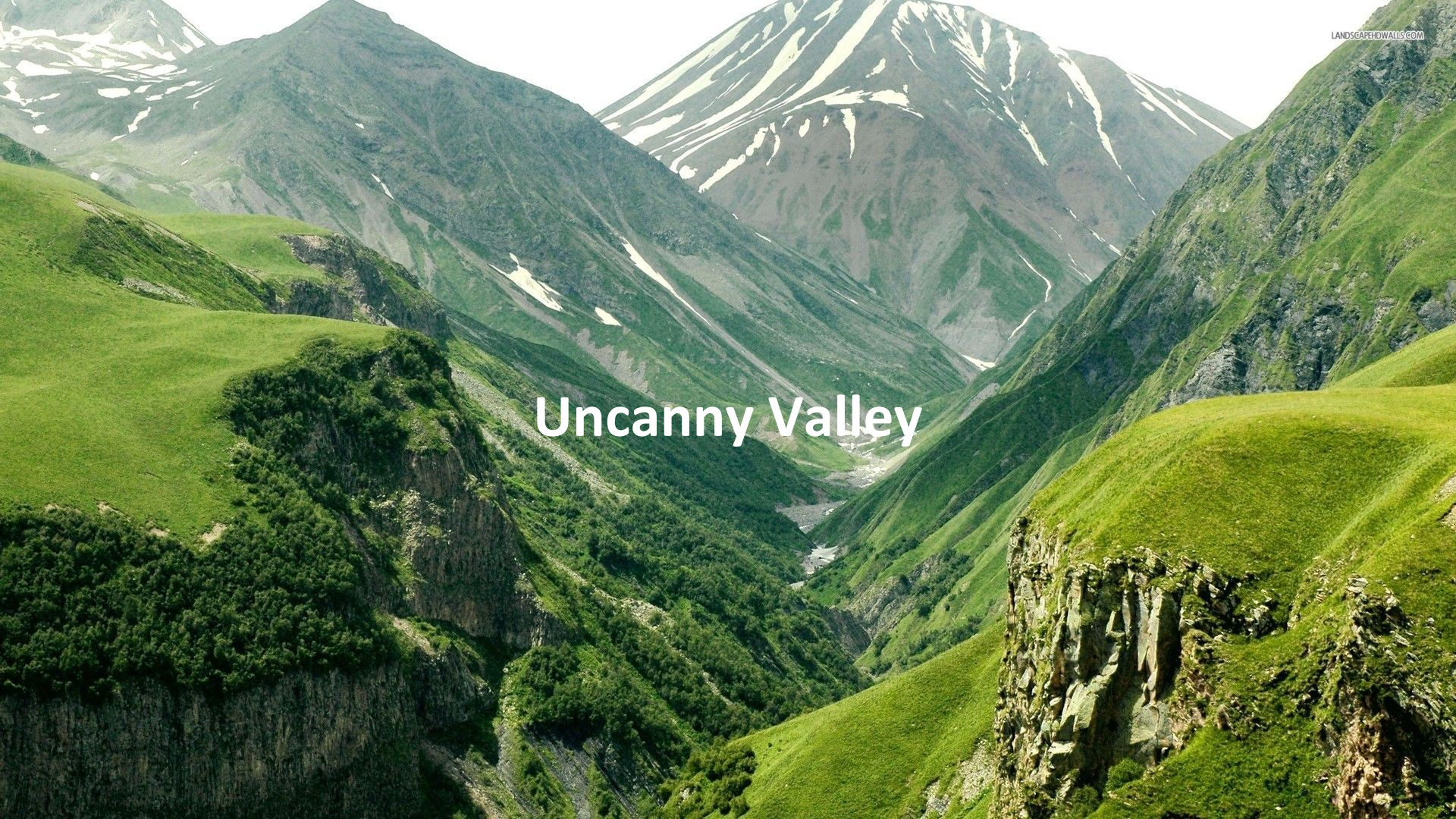
# Sentiment Analysis

- identifies the sentiment of a text
- varying accuracy
- no sarcasm/ irony
- implementations range from simple to super complex
- paid services like IBM watson

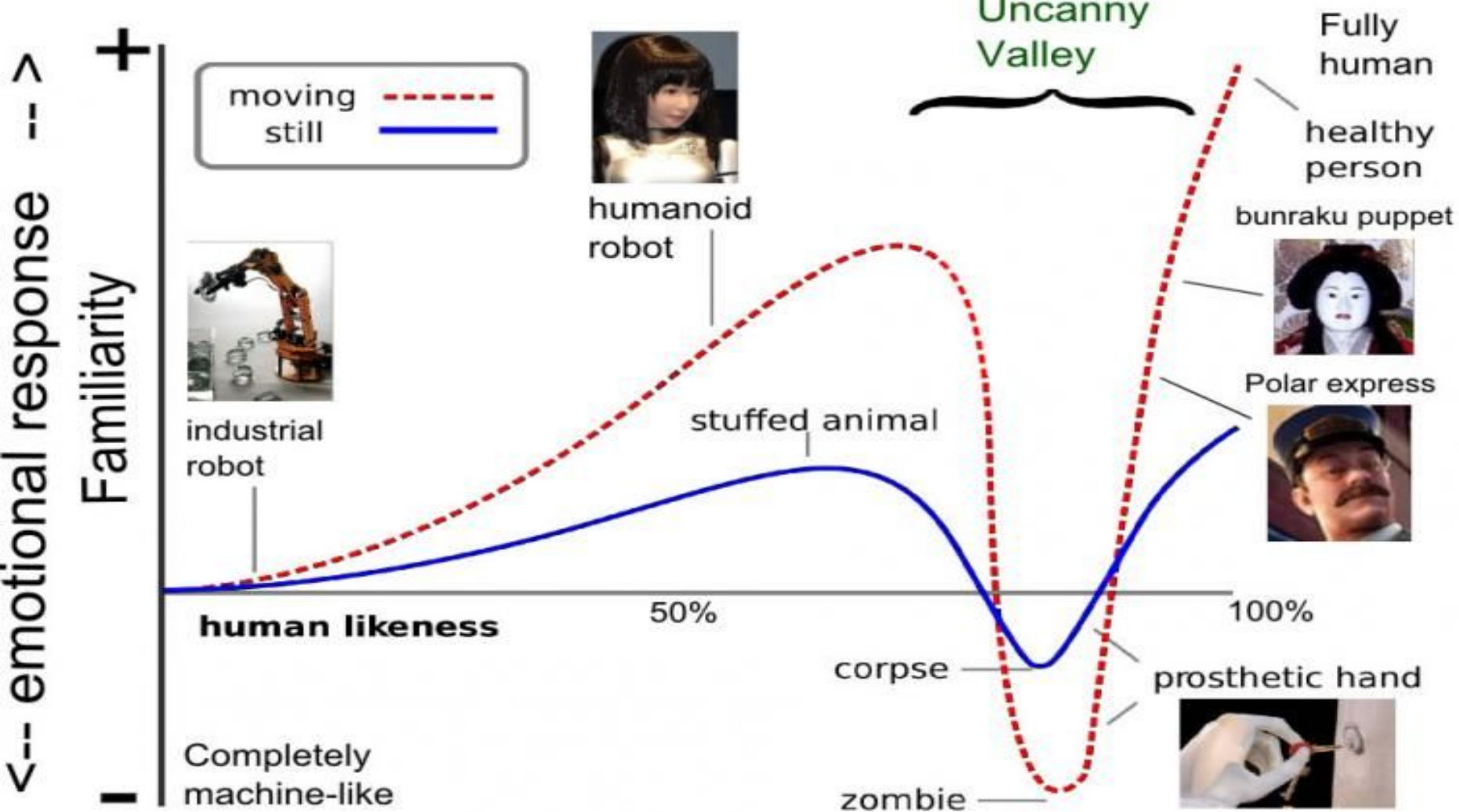




# Uncanny Valley





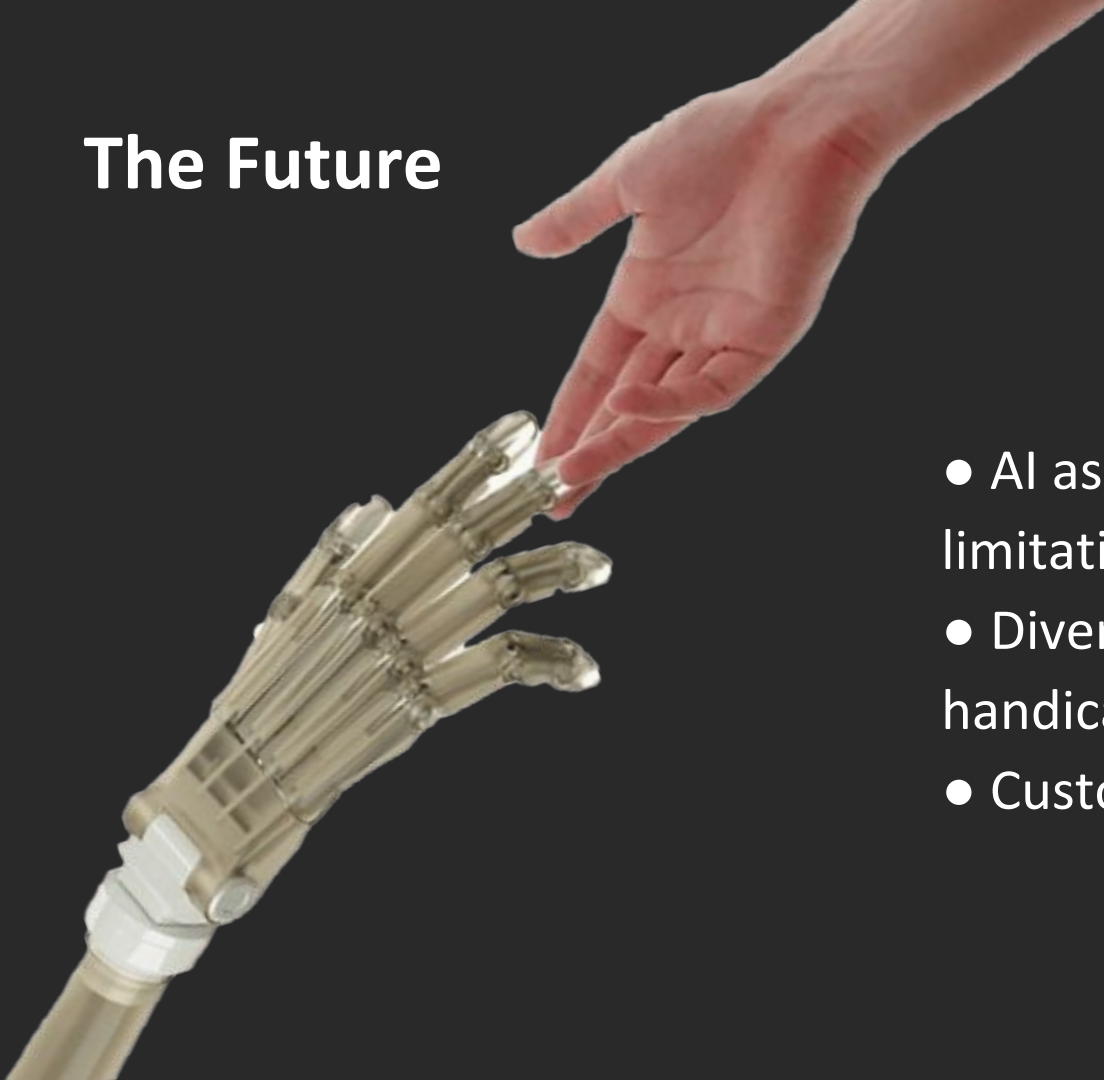


A computer monitor with a grey bezel. The screen has a blue background. In the center is a circular progress indicator. The left half of the circle is a pizza with pepperoni toppings, and the right half is white. The text 'The Future' is centered over the circle in a large, bold, black font. Below the circle, the text 'DOWNLOADING PIZZA...' is written in a light blue, pixelated font. In the bottom right corner of the monitor's bezel, there is a small circular icon with a black 'f' inside, representing Facebook.

# The Future

DOWNLOADING PIZZA...

# The Future



- AI as design constraint rather than limitation
- Diverse games, better support for handicaps
- Customised game experiences

# Bert's Future

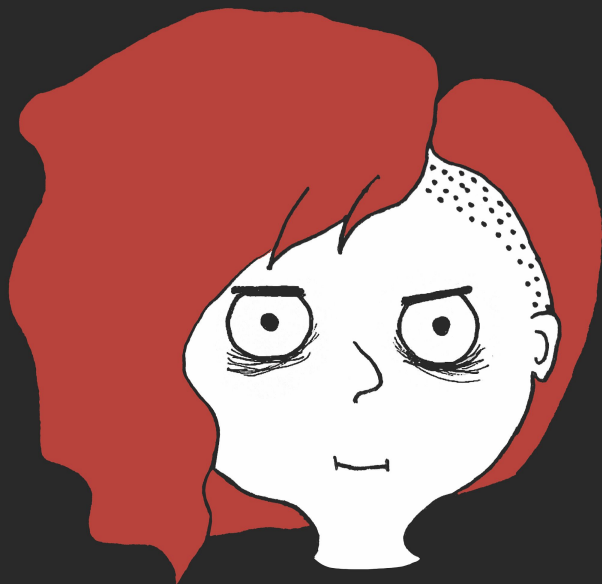


- playtesting with kids
- wireless
- standalone, no screen
- open source, DIY, or commercial?





# Thank You!



**Follow me:**

@dasmalle

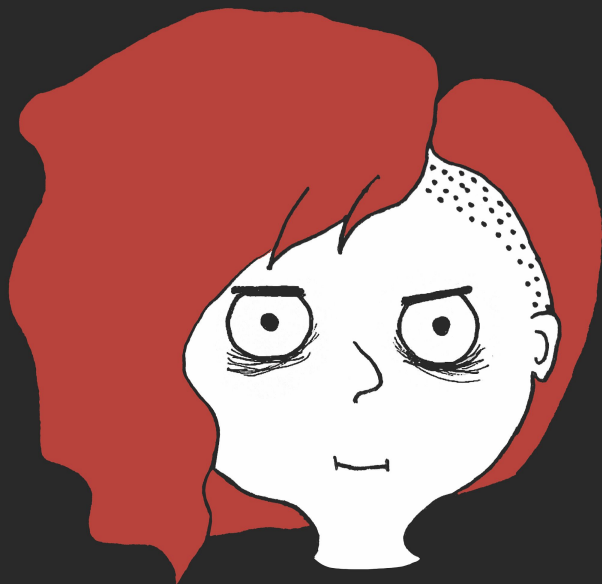
malenaklaus@gmail.com

www.malenaklaus.de

A group of pink flamingos are shown from the chest up, with their long necks extended upwards in various directions. They have black beaks and are set against a blurred green background. The word "Questions?" is overlaid in the center in white text.

Questions?

# Questions?



**Follow me:**

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