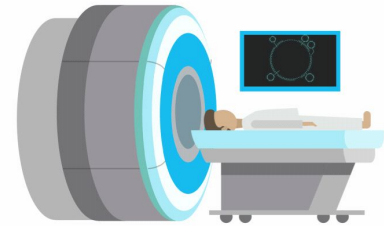


Using a social robot as mediator between healthcare workers and child patients with the aim of reducing patient anxiety and stress during chemotherapy



Globally there are more than 300,000 children diagnosed with cancer each year



Hospital staff and parents are busy and under workload pressure and don't have enough time to dedicate to the child



Child (6-9 years old) is feeling stressed and anxious for the chemotherapy session



For this reason, we introduce Nao!

- **Colorful** and elegant robot with a **big smile** and **red nose**, to encourage optimism and laughter
- Similar to a human being, without hiding that he is a robot
- Not too many clothes, so that he can **move freely** and easily in different directions



Preconditions:
Parents agree on using Nao



Nao is positioned in front of the child and turned on.





In the **first interaction** Nao will:

- Get to know the child and his/her feelings (speech recognition, sentimental analysis)
- Initiate the bonding process with him/her with some tricks (e.g. eye color changed)
- Explain medical matters in simple words
- Ask for confirmation by touching his head.

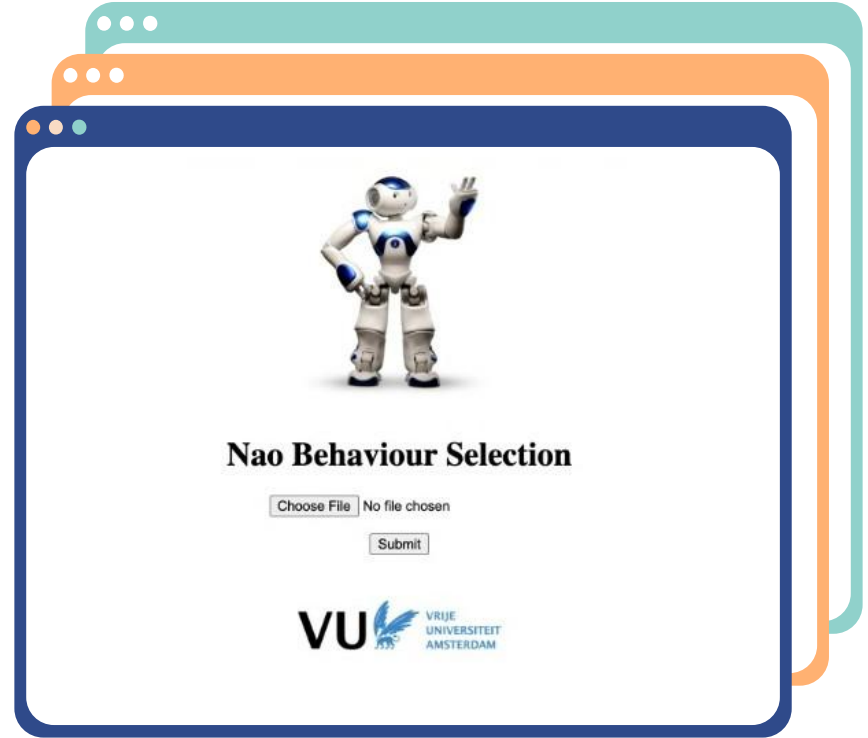
The **second interaction** happens in the treatment room where Nao will entertain the kid by:

- Playing an animal game (speech recognition, gestures),
- Dancing and/or singing.



Created an easy-to-use interface for the hospital staff.

- Choose which .json file (conversation) is needed
- Interaction can start as soon as Nao is connected.



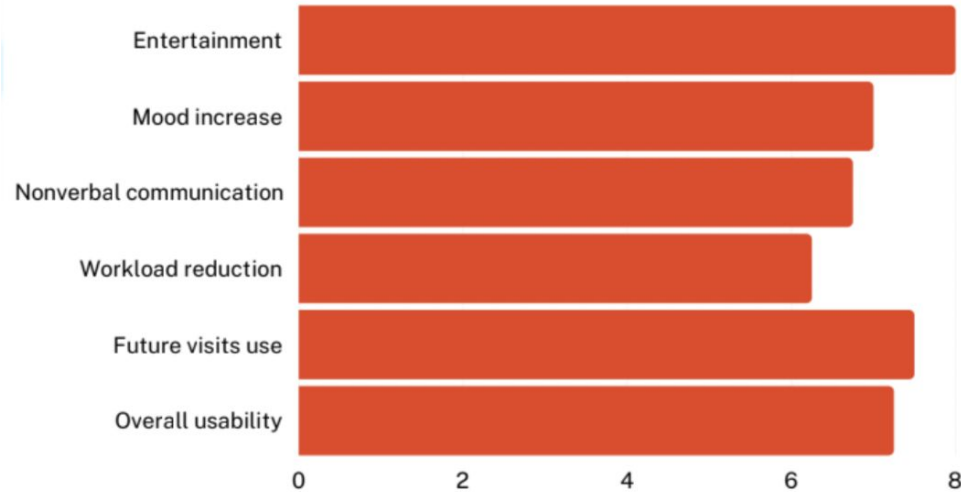


Postconditions:

- The robot has learned some important details about the child (name, age, hobbies).
- The child's anxiety and stress levels are reduced by shifting its attention to the new friend (Nao).
- Parents and Medical staff workload decrease too

EXPERIMENT: QUESTIONNAIRE RESULTS

- 4 external participants
- POSITIVE feedback
- Speech clarity as improvement suggestion



Nao's obtained score is **7.125/10.**

THANK YOU!



Group 14

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