Lab Usable Security and Privacy - Survey on Appearance of Robots and Privacy Concerns

Results
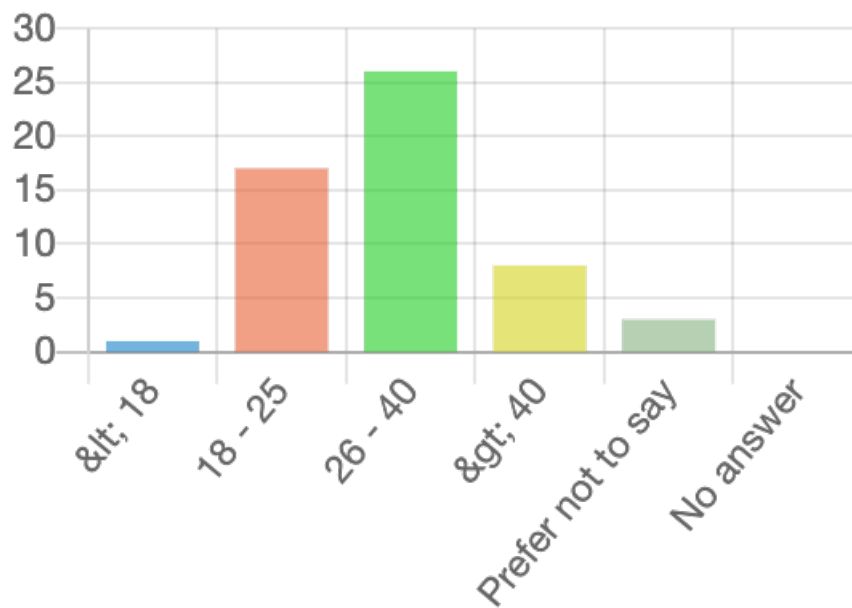
Survey 599179

|	
Number of records in this query:	55
Total records in survey:	55
Percentage of total:	100.00%

Summary for Q00

Which age group do you belong to?

Answer	Count	Percentage
< 18 (A1)	1	1.82%
18 - 25 (A2)	17	30.91%
26 - 40 (A3)	26	47.27%
> 40 (A4)	8	14.55%
Prefer not to say (A5)	3	5.45%
No answer	0	0.00%
Not displayed	0	0.00%

Summary for Q01

What is your gender?

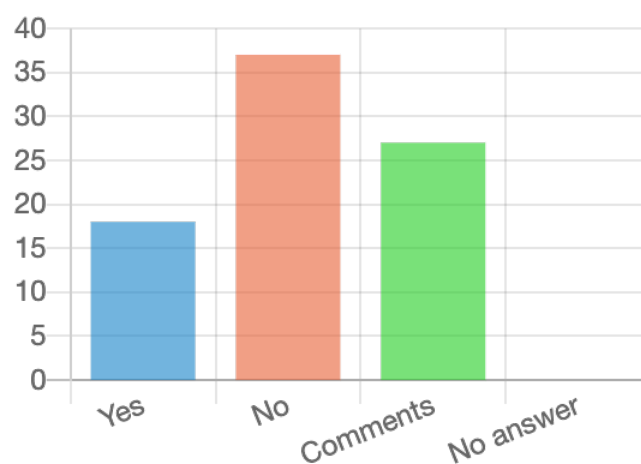| Answer	Count	Percentage
Male (A1)	36	65.45%
Female (A2)	18	32.73%
Other (A3)	1	1.82%
Prefer not to say (A4)	0	0.00%
No answer	0	0.00%
Not displayed	0	0.00%
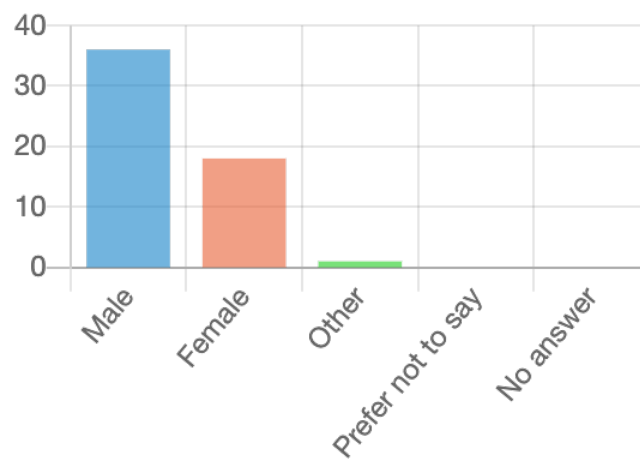
Summary for Q03

Do you have a pet? If yes, please specify which pet (Eg: dog, cat, etc).   If no, would you like to own a pet?
(Please mention your answer in the comment box)

Answer	Count	Percentage
Yes (A1)	18	32.73%
No (A2)	37	67.27%
Comments	27	49.09%
No answer	0	0.00%
Not displayed	0	0.00%

ID	Response
5	Yes, a dog!
6	Cat
10	Yes
12	Dog
17	Cat
18	No
19	Yes
24	I do love animals but not comfortable having at home.
28	Shih Tzu loving most adorable dog
29	Dog
30	Dog
36	Have an aquarium, with 5 fishes.
41	2 year old Shitzui by name Bunny
45	Back home I have pets but it would be nice to have a pet who is well trained in student accommodation
48	We had a pet when kids were small but now not willing to have a pet
50	Cat
53	By keeping pet we can't bound it to eat only our good , it's like taking away their freedom from open world
54	Cat
57	Fish, Sea slug
58	cat
59	Not right now, possibly in the future
60	Yes
61	Dog
62	dog
63	no
65	cat
70	Want to have a dog/cat in the future

Summary for Q04

Do you have a child?

Answer	Count	Percentage
Yes (A1)	16	29.09%
No (A2)	39	70.91%
No answer	0	0.00%
Not displayed	0	0.00%
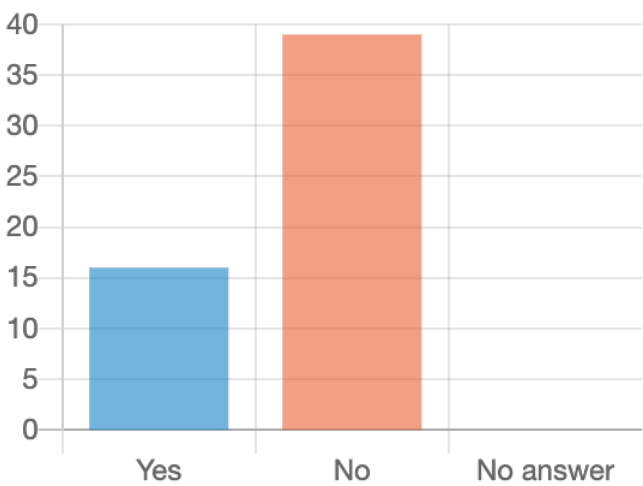
Summary for G2Q01

For healthcare assistance at home or at a hospital, which robot would you trust more? A robot with facial recognition capabilities or one without it? Eg: Care-o-bot is a robot with facial recognition feature.
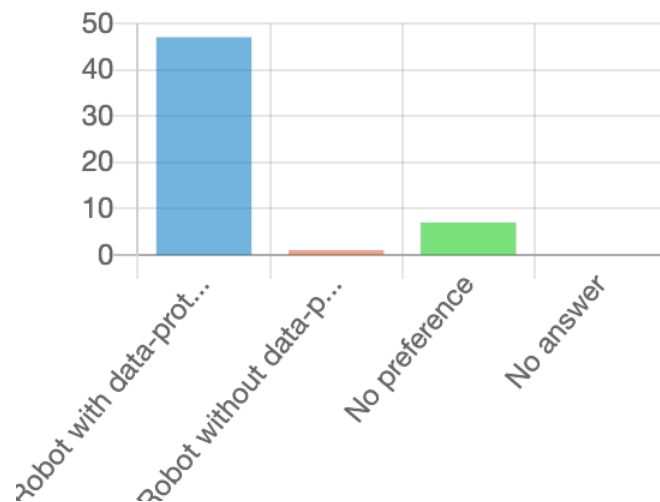
Answer	Count	Percentage
Robot with facial recognition feature (A1)	37	67.27%
Robot without facial recognition feature (A2)	10	18.18%
No preference (A3)	8	14.55%
No answer	0	0.00%
Not displayed	0	0.00%
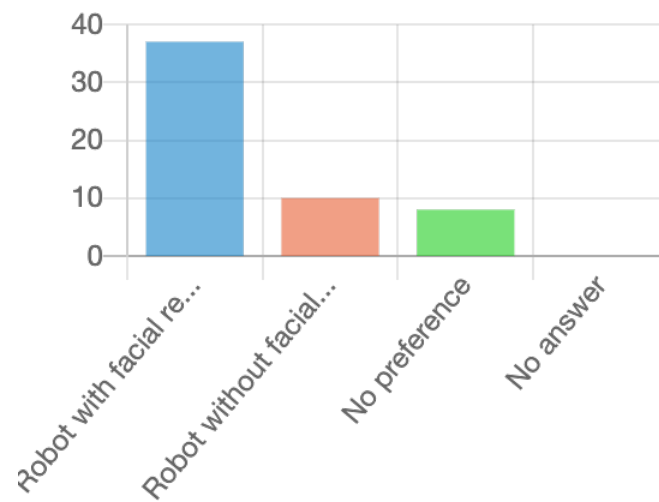
Summary for G2Q02

Which robot would you trust more for medical assistance? A robot with a well-defined data protection guideline or one without it?

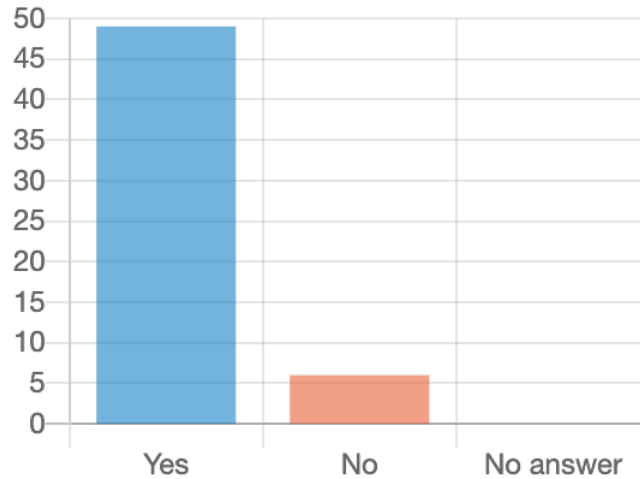| Answer	Count	Percentage
Robot with data-protection guideline (A1)	47	85.45%
Robot without data-protection guideline (A2)	1	1.82%
No preference (A3)	7	12.73%
No answer	0	0.00%
Not displayed	0	0.00%

Summary for G2Q03(SQ001)[Likely to trust]

On a scale of 1-10, how likely are you to trust a robot that can transfer your personal & medical data to a third party (Eg: owner company)?

Answer	Count	Percentage
1 (1)	11	20.00%
2 (2)	4	7.27%
3 (3)	0	0.00%
4 (4)	3	5.45%
5 (5)	9	16.36%
6 (6)	8	14.55%
7 (7)	6	10.91%
8 (8)	6	10.91%
9 (9)	1	1.82%
10 (10)	5	9.09%
No answer	2	3.64%
Not displayed	0	0.00%

Summary for G2Q05

Would you be comfortable sharing your personal data with a doctor? Note: Personal data includes medical history, daily habits, etc., necessary for medical evaluation.

Answer	Count	Percentage
Yes (A1)	49	89.09%
No (A2)	6	10.91%
No answer	0	0.00%
Not displayed	0	0.00%

Summary for G2Q04(SQ001)[Likely to trust]

On a scale of 1-10, how likely are you to trust a robot which is equipped with microphones and capable of recording your conversation?

Answer	Count	Percentage
1 (1)	12	21.82%
2 (2)	1	1.82%
3 (3)	6	10.91%
4 (4)	3	5.45%
5 (5)	12	21.82%
6 (6)	4	7.27%
7 (7)	5	9.09%
8 (8)	4	7.27%
9 (9)	1	1.82%
10 (10)	4	7.27%
No answer	3	5.45%
Not displayed	0	0.00%

Summary for G2Q04(SQ001)[Likely to trust]
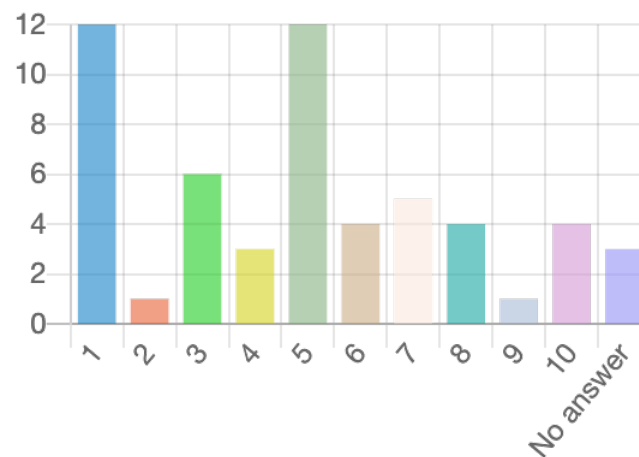
Summary for G2Q005(SQ001)[NAO - Humanoid Robot]

NAO is a humanoid robot used to make people feel comfortable during their visits to the hospital. NAO is equipped with microphones and can record any conversation. How comfortable would you be sharing your personal data with a doctor in the presence of a humanoid robot, such as NAO, that can record your conversation? Rate your answer on a scale of 1-10.

Answer	Count	Percentage
1 (1)	9	16.36%
2 (2)	1	1.82%
3 (3)	5	9.09%
4 (4)	4	7.27%
5 (5)	12	21.82%
6 (6)	3	5.45%
7 (7)	4	7.27%
8 (8)	7	12.73%
9 (9)	2	3.64%
10 (10)	5	9.09%
No answer	3	5.45%
Not displayed	0	0.00%
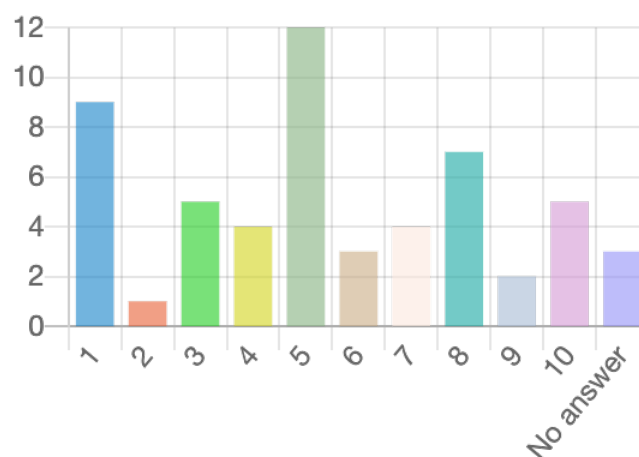
Summary for G2Q006(SQ001)[PARO - animal-like robot]

PARO is an animal-like robot that looks like a seal. PARO is equipped with microphones and is capable of recording conversations. How comfortable would you be sharing your personal data with a doctor in the presence of an animal-like robot, such as PARO, that can record your conversation? Rate your answer on a scale of 1-10.

| Answer	Count	Percentage
1 (1)	9	16.36%
2 (2)	2	3.64%
3 (3)	3	5.45%
4 (4)	5	9.09%
5 (5)	9	16.36%
6 (6)	4	7.27%
7 (7)	6	10.91%
8 (8)	4	7.27%
9 (9)	4	7.27%
10 (10)	6	10.91%
No answer	3	5.45%
Not displayed	0	0.00%
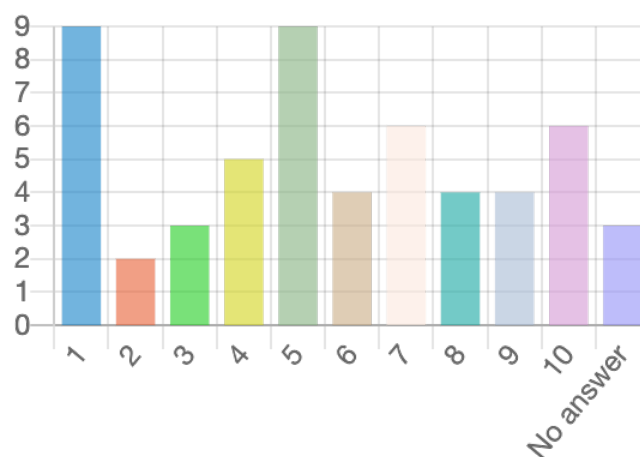
Summary for G2Q07

While having a personal conversation with your family members, which robot would you feel more comfortable in the presence of? A humanoid robot (e.g., AMECA) or an animal-like robot (e.g., AIBO) Note: Both robots are equipped with microphones and are capable of recording your conversations with consent. Option 1: Humanoid Robot (AMECA)   Option 2: Animal-like Robot (AIBO)
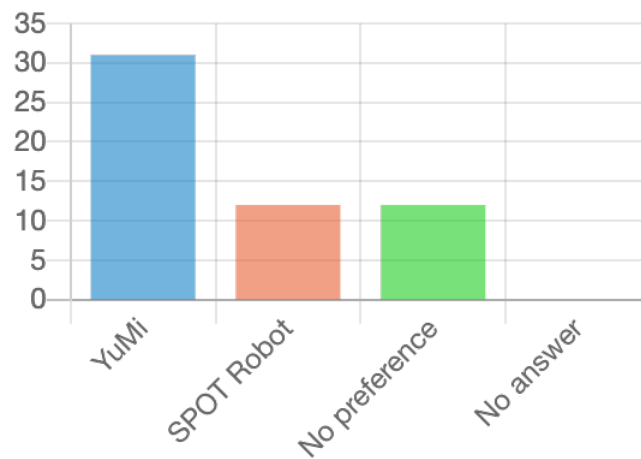
Answer	Count	Percentage
AMECA (A1)	11	20.00%
AIBO (A2)	24	43.64%
No preference (A3)	20	36.36%
No answer	0	0.00%
Not displayed	0	0.00%
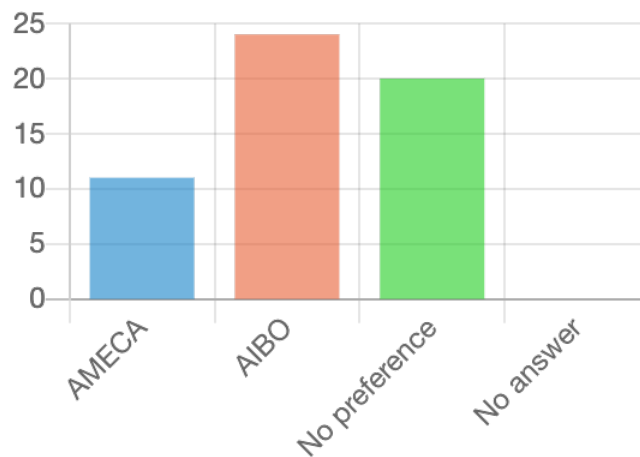
Summary for G2Q10

During quarantine, robots are useful to measure vitals when human-human interaction is not safe. In such a situation, with which robot would you be more comfortable taking your vitals (E.g.: blood pressure, temperature, etc)? Option 1: Humanoid Robot (Eg: YuMi - human-like limbs)   Option 2: Animal-like robot (Eg: SPOT - animal-like limbs)

Answer	Count	Percentage
YuMi (A1)	31	56.36%
SPOT Robot (A2)	12	21.82%
No preference (A3)	12	21.82%
No answer	0	0.00%
Not displayed	0	0.00%

Summary for G2Q11

Suppose you are sick and bed-ridden, which robot would you prefer to deliver your necessities such as medicine, food, water, etc? Option 1: Humanoid robot (PEPPER)   Option 2: Animal-like robot (SPOT)

Answer	Count	Percentage
PEPPER Robot (A1)	34	61.82%
SPOT Robot (A2)	8	14.55%
No preference (A3)	13	23.64%
No answer	0	0.00%
Not displayed	0	0.00%
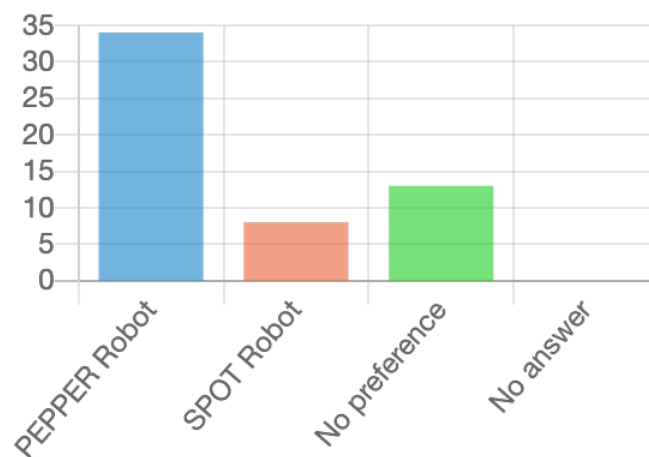
Summary for G2Q13

When undergoing treatment or therapy in a hospital, would you like to have an animal-like companion robot or a child-like companion robot? PARO (An animal-like robot used in therapy)   Kabochan (A child-like robot used in therapy)

Answer	Count	Percentage
Paro Robot (A1)	30	54.55%
Kabochan Robot (A2)	16	29.09%
No preference (A3)	9	16.36%
No answer	0	0.00%
Not displayed	0	0.00%
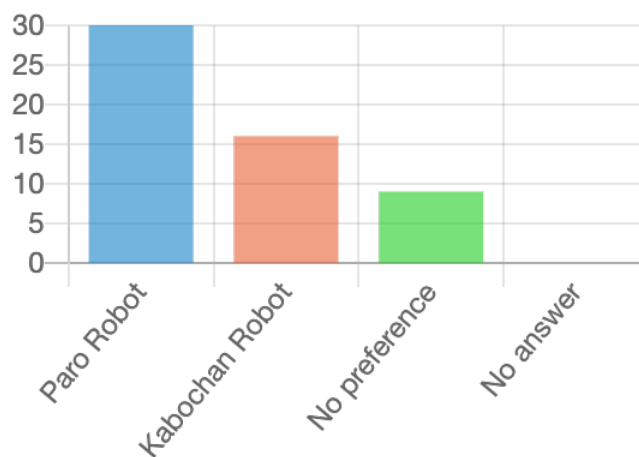
Summary for G2Q14

During recovery in a hospital or at home, which animal-like robot would you prefer/trust to use more? A robot that is capable of reacting when touched, (for e.g., by making a sound or eye movement) or one not capable of reacting to touch? Example: TABBY cat-like robot (can move when touched, and also purrs in response)

Answer	Count	Percentage
Yes, I would prefer a robot that can interact with me based on touch (A1)	41	74.55%
No, I would not prefer to interact with a robot with touch sensors (e.g., due to privacy reasons) (A2)	5	9.09%
No preference (A3)	9	16.36%
No answer	0	0.00%
Not displayed	0	0.00%
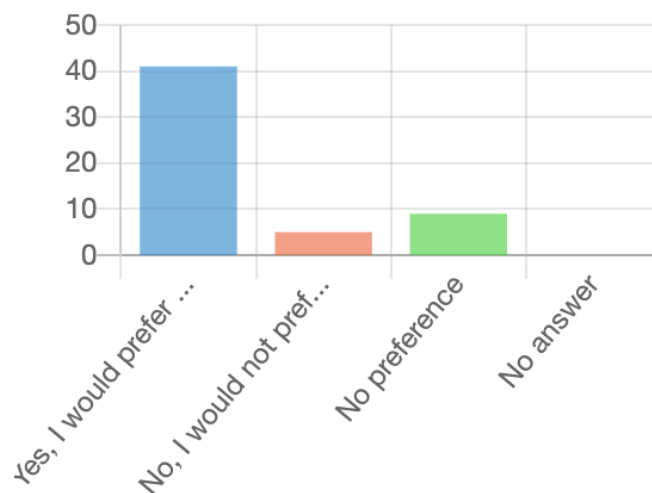
Yes, I would prefer a robot that can interact with me based on touch

No, I would not prefer to interact with a robot with touch sensors (e.g., due to privacy reasons)

No preference

No answer

Summary for G2Q12(SQ001)[Likely to trust]

Robots are equipped with sensors, cameras and microphones to monitor and interact with humans during healthcare assistance. On a scale of 1-10, how likely are you to trust a humanoid robot that monitors and records all activities performed by you? E.g. PEPPER humanoid robot

Answer	Count	Percentage
1 (1)	9	16.36%
2 (2)	1	1.82%
3 (3)	6	10.91%
4 (4)	4	7.27%
5 (5)	7	12.73%
6 (6)	7	12.73%
7 (7)	5	9.09%
8 (8)	5	9.09%
9 (9)	3	5.45%
10 (10)	5	9.09%
No answer	3	5.45%
Not displayed	0	0.00%
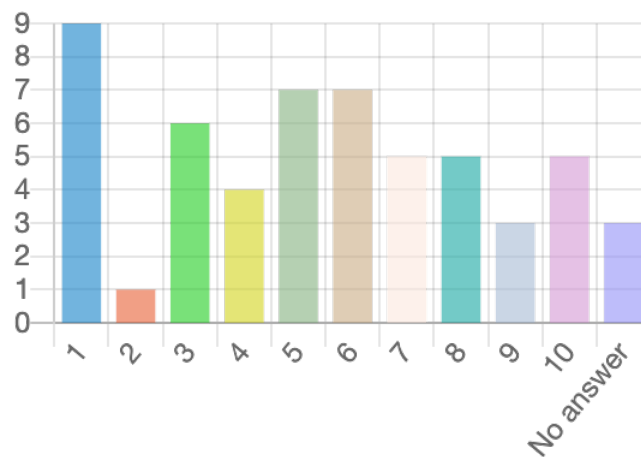
Summary for G2Q16(SQ001)[Likely to trust a robot with visible camera]

Cameras are integrated into robots to record surrounding data or for movement. On a scale of 1-10, how likely are you to trust a robot that looks like an animal and has visible cameras? AIBO (An animal-like robot with visible camera)

Answer	Count	Percentage
1 (1)	10	18.18%
2 (2)	4	7.27%
3 (3)	4	7.27%
4 (4)	6	10.91%
5 (5)	6	10.91%
6 (6)	6	10.91%
7 (7)	6	10.91%
8 (8)	5	9.09%
9 (9)	1	1.82%
10 (10)	3	5.45%
No answer	4	7.27%
Not displayed	0	0.00%
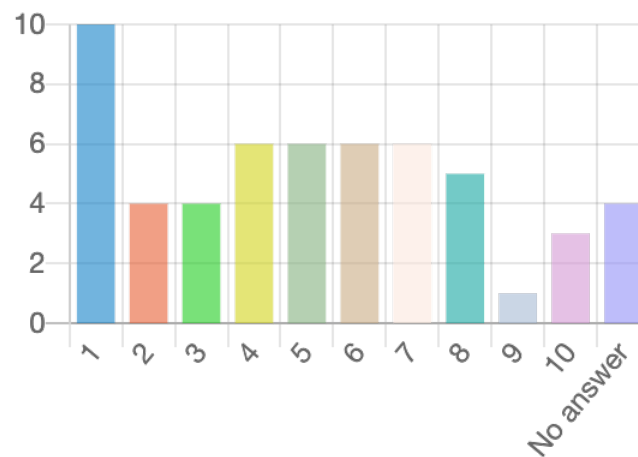
Summary for G2Q17

Pupil dilation and eye movements play a vital role in building trust. When undergoing treatment in the hospital, would you prefer a humanoid nurse robot with robotic eyes (e.g: PEARL), or a robot with human-like eyes capable of eye movement and establishing communication (e.g. AMECA)? PEARL: AMECA:

Answer	Count	Percentage
PEARL - robotic eyes (A1)	11	20.00%
AMECA - human like eye movements (A2)	30	54.55%
No preference (A3)	14	25.45%
No answer	0	0.00%
Not displayed	0	0.00%
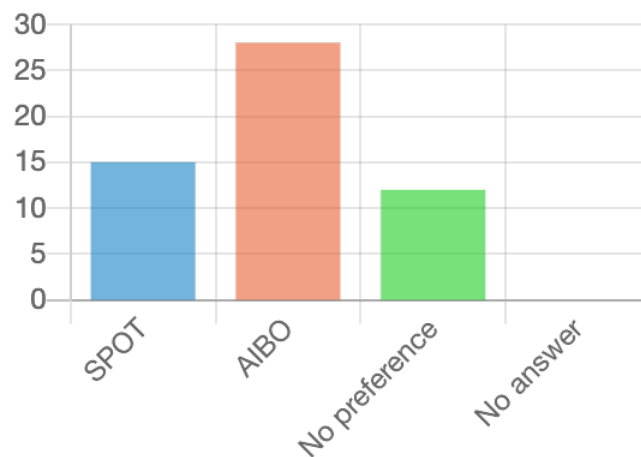
Summary for G2Q19

Animal-like or pet-like robots offer companionship and assistance when a person is sick or feeling lonely. They understand the human voice and follow commands. Would you prefer an animal-like robot with a face eg. AIBO or without any facial structure eg SPOT?   AIBO (animal-like body with animal-like facial structure):   SPOT (animal-like body but no facial structure):
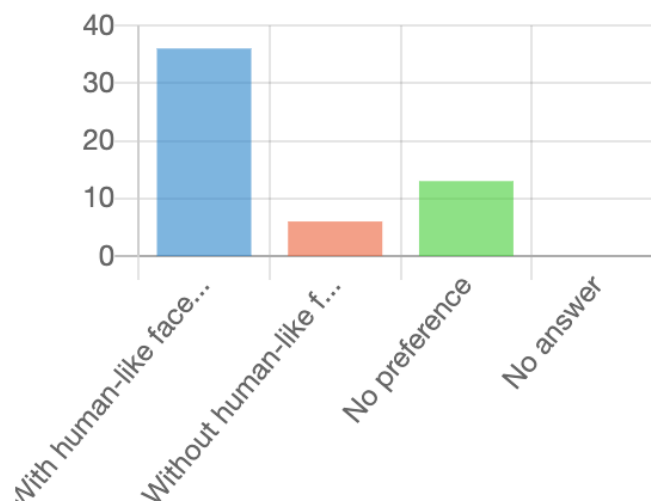
Answer	Count	Percentage
SPOT (A1)	15	27.27%
AIBO (A2)	28	50.91%
No preference (A3)	12	21.82%
No answer	0	0.00%
Not displayed	0	0.00%

SPOT

AIBO

No preference

No answer
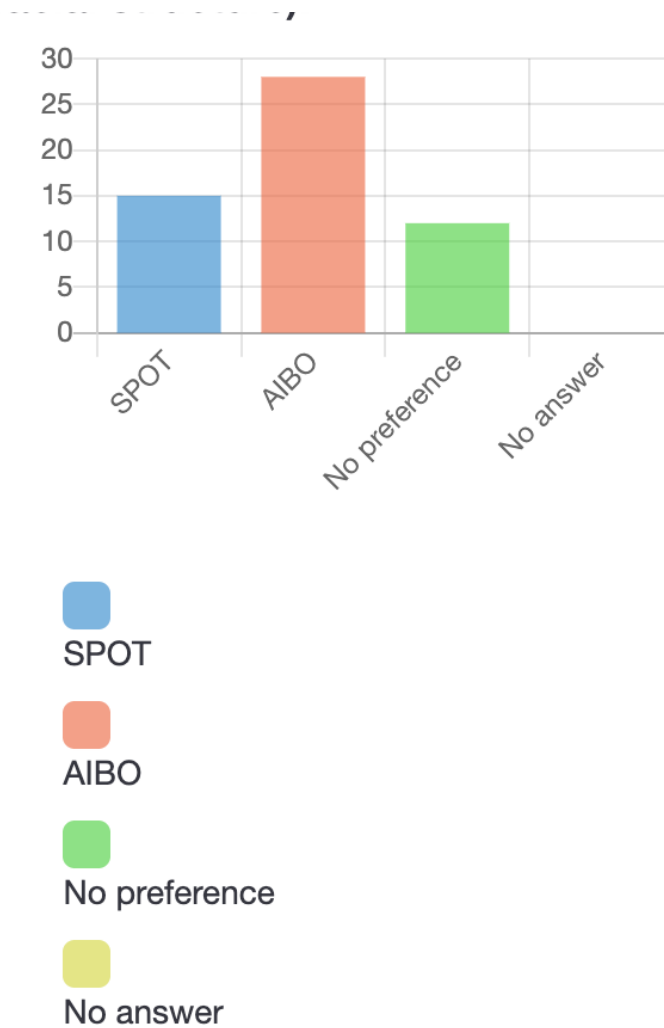
Summary for G2Q18

A robot offers many services to people with medical conditions at the hospital. It reminds us about medicine and food, helps in mobility, and offers companionship. Which robot are you likely to trust/prefer more during such tasks? A humanoid robot with a human-like face (e.g. PEPPER) or one without a human-like facial structure (e.g. DIGIT)? PEPPER: A humanoid robot with human-like face: DIGIT: A humanoid robot without human-like face

| Answer	Count	Percentage
With human-like face (PEPPER) (A1)	36	65.45%
Without human-like face (DIGIT) (A2)	6	10.91%
No preference (A3)	13	23.64%
No answer	0	0.00%
Not displayed	0	0.00%

Summary for G2Q20

The images below show two humanoid robots AMECA and PEARL. AMECA is capable of expressing emotions and understading user's sentiments during communication, whereas PEARL is not. If a robot is assisting you with your medical needs (e.g. delivering medicine, performing check-ups, etc.), which robot would you trust more? AMECA: : PEARL:

Answer	Count	Percentage
AMECA (A1)	36	65.45%
PEARL (A2)	11	20.00%
No preference (A3)	8	14.55%
No answer	0	0.00%
Not displayed	0	0.00%
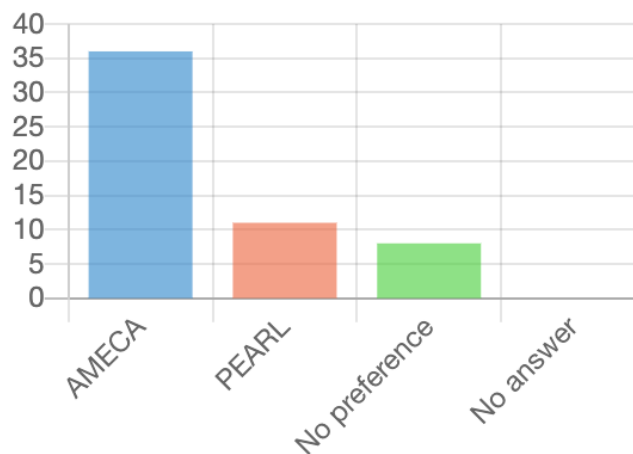
Summary for G2Q09

Large robots are used to help patients unable to move by themselves, In a situation where you require movement assistance from a robot, which robot are you likely to trust more? A robot with human-like limbs or a robot with animal-like limbs? Option 1: Human-like limbs/arms (Eg: Digit)   Option 2: Animal-like limbs (Eg: SPOT)

| Answer	Count	Percentage
Digit Robot (A1)	32	58.18%
SPOT Robot (A2)	11	20.00%
No preference (A3)	12	21.82%
No answer	0	0.00%
Not displayed	0	0.00%
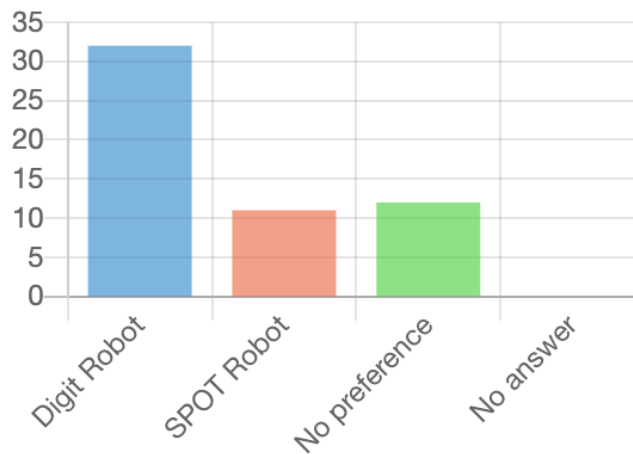
Digit Robot

SPOT Robot

No preference

No answer

Summary for G2Q21

Robots help patients with movement without being dependent on other individuals. Would you trust a robot that has animal-like features (e.g. RIBA) or human-like features (e.g. DIGIT) for mobility assistance?
Animal-like (RIBA - resembling a bear):   Human-like (DIGIT Robot):

| Answer	Count	Percentage
Animal-like (RIBA) (A1)	32	58.18%
Human-like (DIGIT) (A2)	13	23.64%
No preference (A3)	10	18.18%
No answer	0	0.00%
Not displayed	0	0.00%
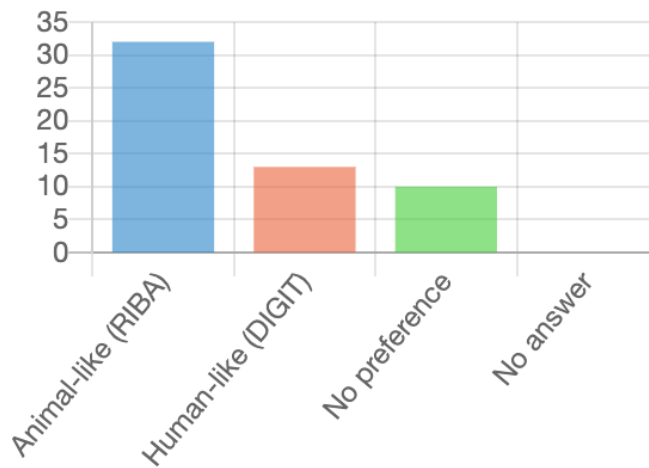
Summary for G2Q22

Nurse bots are robots that assist patients with their needs, similar to a nurse. While recovering in a hospital, would you prefer a humanoid nurse bot that is capable of speaking (e.g. PEPPER) or a humanoid nurse bot that communicates only through texts (e.g. PEARL)? PEPPER: PEARL:

Answer	Count	Percentage
PEPPER Robot (A1)	42	76.36%
PEARL Robot (A2)	5	9.09%
No preference (A3)	8	14.55%
No answer	0	0.00%
Not displayed	0	0.00%
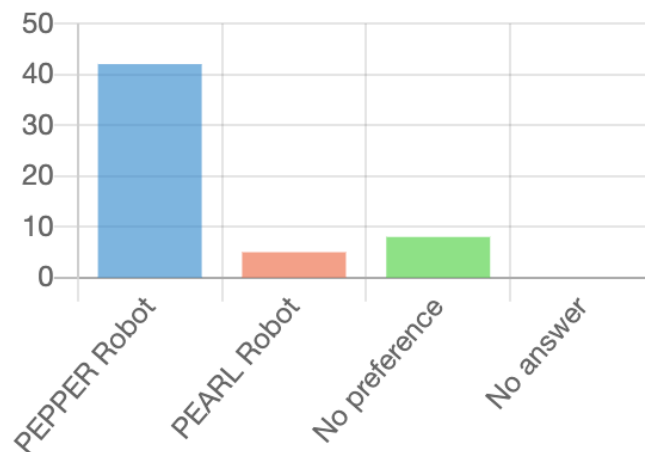
PEPPER Robot

PEARL Robot

No preference

No answer

Summary for G2Q08

Robots are used for therapy assistance to relieve emotional distress. Which robot would you trust more to share personal information with during therapy - an animal-like robot (PARO) or a humanoid robot (QTrobot)? Option 1: Animal-like robot (e.g.: PARO) Option 2: Humanoid robot (e.g.: QTrobot)

Answer	Count	Percentage
PARO (A1)	27	49.09%
QTrobot (A2)	20	36.36%
No preference (A3)	8	14.55%
No answer	0	0.00%
Not displayed	0	0.00%
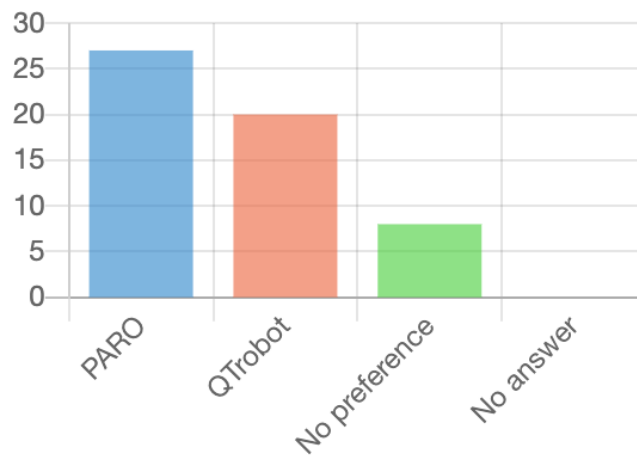
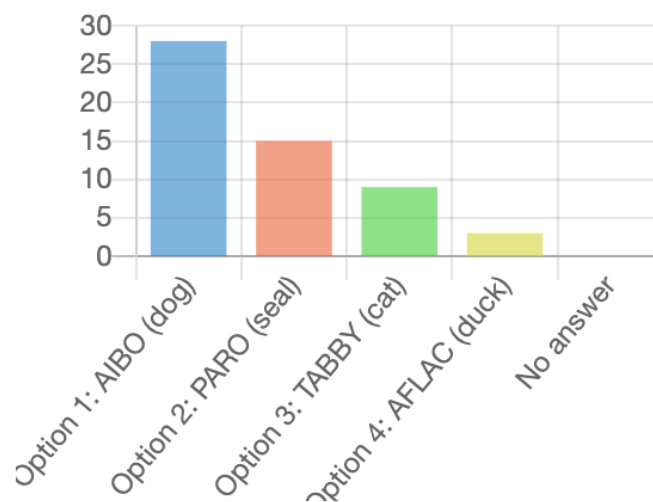PARO

QTrobot

No preference

No answer

Summary for G2Q26

Which of the following animal-like robots would you prefer as a companion during your therapy sessions with a doctor? Option 1: AIBO: resembles a dog   Option 2: PARO: resembles a seal   Option 3: TABBY: resembles a cat   Option 4: AFLAC: resembles a duck

Answer	Count	Percentage
Option 1: AIBO (dog) (A1)	28	50.91%
Option 2: PARO (seal) (A2)	15	27.27%
Option 3: TABBY (cat) (A3)	9	16.36%
Option 4: AFLAC (duck) (A4)	3	5.45%
No answer	0	0.00%
Not displayed	0	0.00%

Option 1: AIBO (dog)

Option 2: PARO (seal)

Option 3: TABBY (cat)

Option 4: AFLAC (duck)

No answer

Summary for G2Q24

If you have a child and the child is under treatment, which robot would you prefer for your children to interact with? A human child-like robot (e.g. Kabochan), or an animal-like robot (e.g. ALFAC duck)?
Kabochan robot: AFLAC duck:

Answer	Count	Percentage
Child Robot (Kabochan) (A1)	12	21.82%
Aflac Duck (A2)	24	43.64%
No preference (A3)	6	10.91%
Does not apply (A4)	13	23.64%
No answer	0	0.00%
Not displayed	0	0.00%
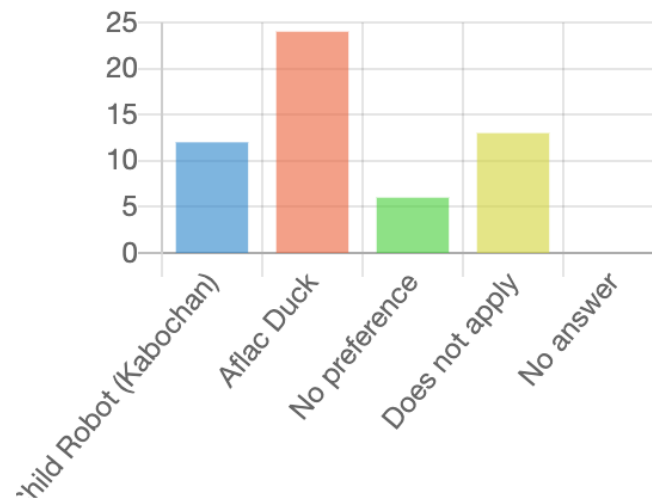
Child Robot (Kabochan)

Aflac Duck

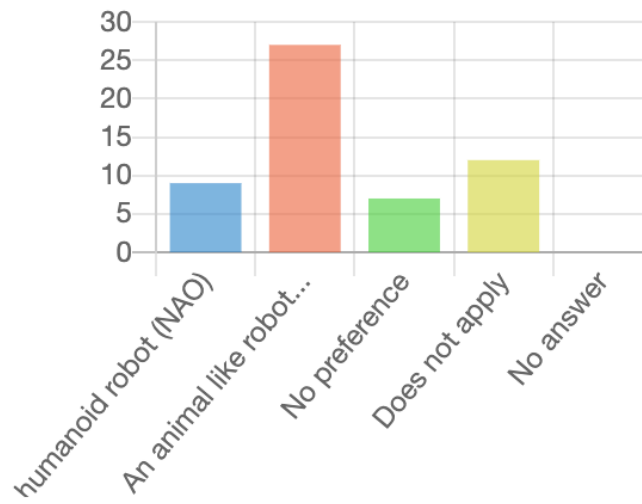No preference

Does not apply

No answer

Summary for G2Q15

If you have a child and the child requires treatment on hospital premises, would you trust a humanoid robot or an animal-like robot to interact with your child? A humanoid robot (NAO)   An animal-like robot (AIBO)

Answer	Count	Percentage
A humanoid robot (NAO) (A1)	9	16.36%
An animal like robot (AIBO) (A2)	27	49.09%
No preference (A3)	7	12.73%
Does not apply (A4)	12	21.82%
No answer	0	0.00%
Not displayed	0	0.00%

A humanoid robot (NAO)

An animal like robot (AIBO)

No preference

Does not apply

No answer

Summary for G2Q25(SQ001)[Likely to trust]

Nurse robots assist patients with their medical needs. On a scale of 1-10, how likely are you to trust a humanoid nurse robot if it can interact with other nurse robots and transfer your data through a synced cloud platform? NAO robot:

Answer	Count	Percentage
1 (1)	10	18.18%
2 (2)	4	7.27%
3 (3)	2	3.64%
4 (4)	3	5.45%
5 (5)	10	18.18%
6 (6)	3	5.45%
7 (7)	7	12.73%
8 (8)	6	10.91%
9 (9)	2	3.64%
10 (10)	6	10.91%
No answer	2	3.64%
Not displayed	0	0.00%