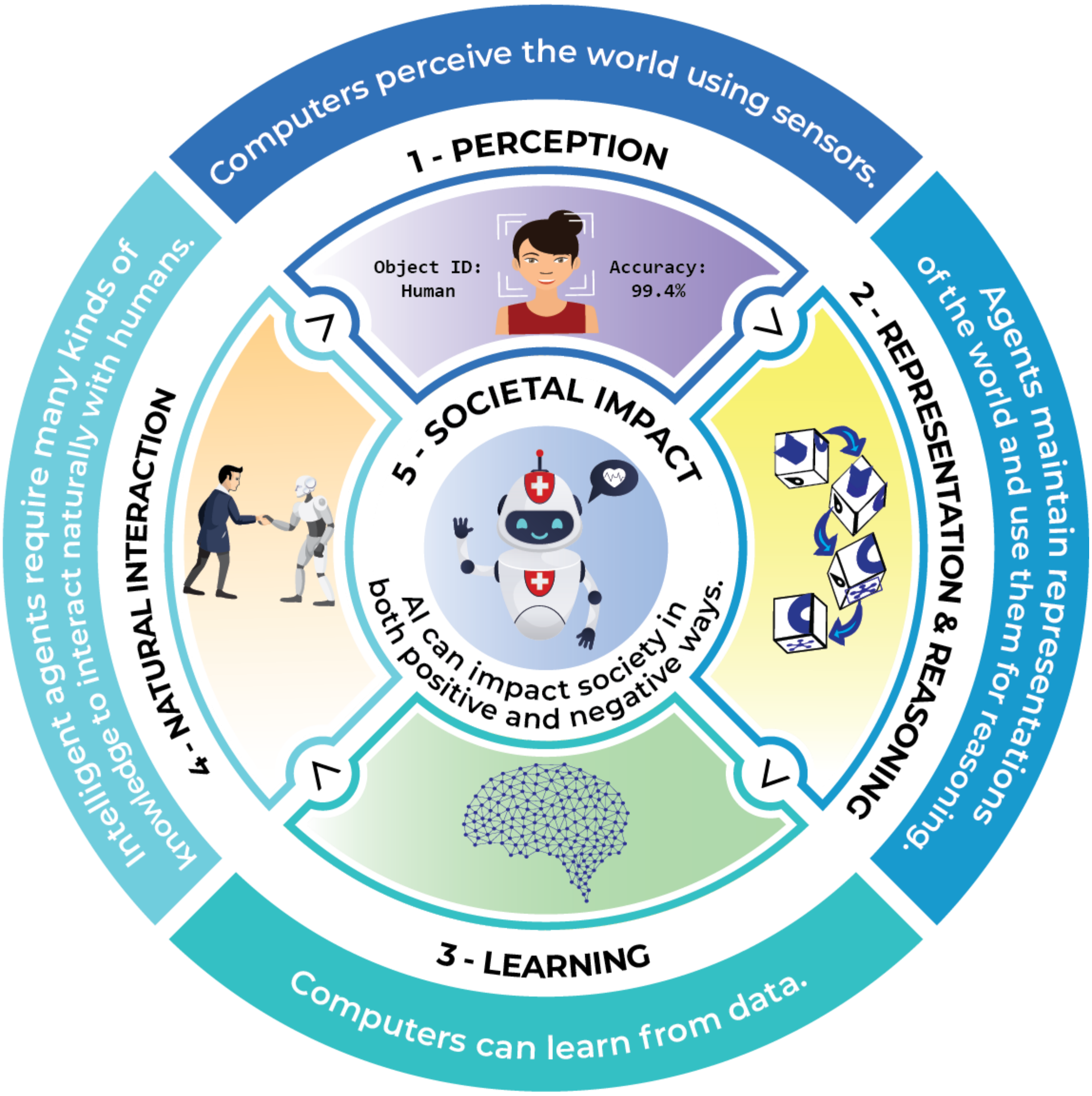
Name: ____________________ Class: ____________ Date: ________________

Worksheet 3:
Five Big Ideas of AI

Learning objective: *• Understand the concept of 5 Big Ideas in AI.* *• Apply the concept of five Big Ideas in AI to the PICaboo app.*

Please have a look on the following chart about the relationship of the five ideas of AI: Perception; Representation and Reasoning; Learning; Natural Interaction; Societal Impact.



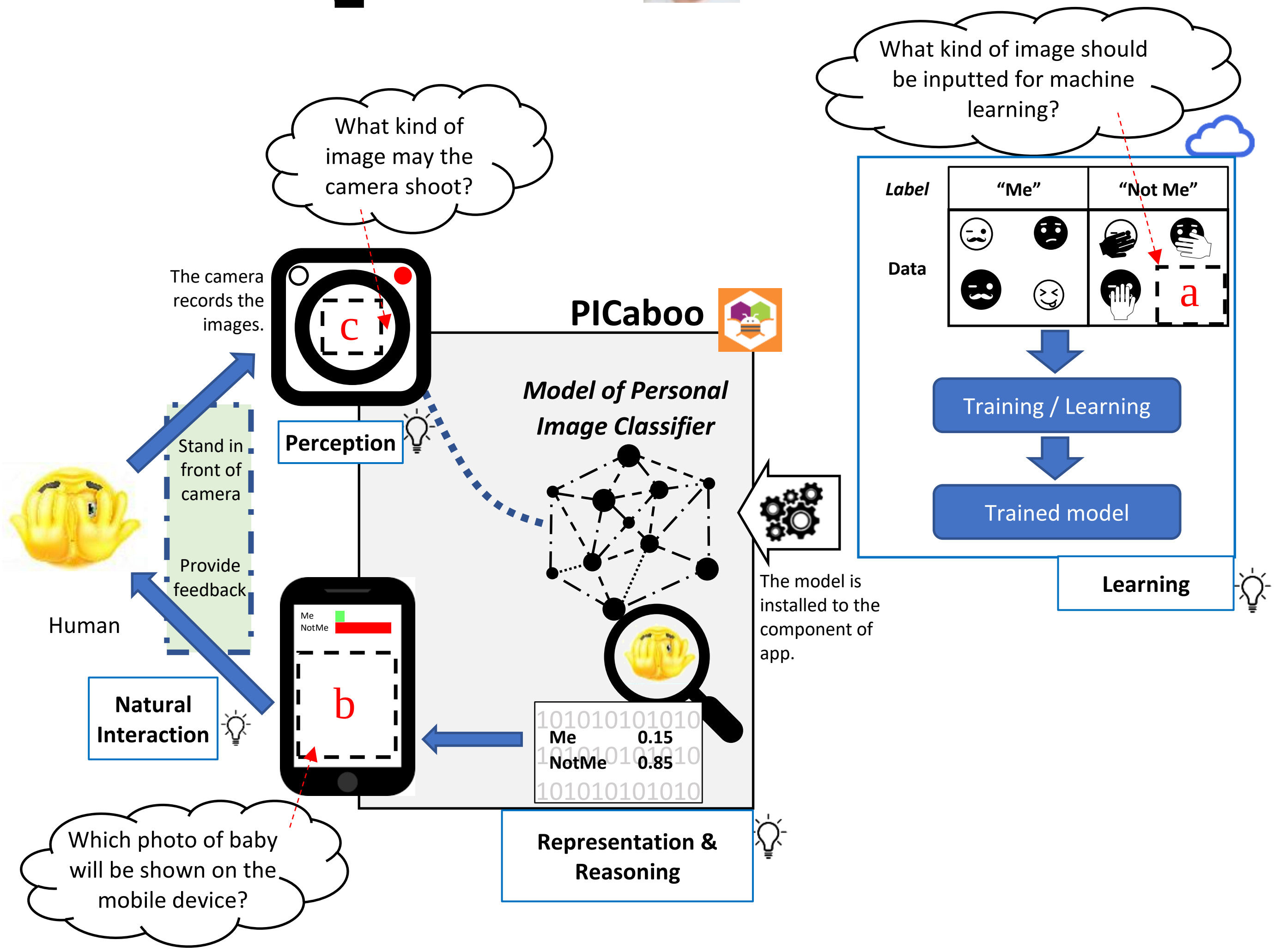
(Source from https://ai4k12.org/resources/big-ideas-poster/)

1. Below is the workflow of the PICaboo app. What kinds of images would be in the following 3 dotted blanks? Fill in the dotted blanks with the English alphabets of options provided.

a. 

b. 

c. 



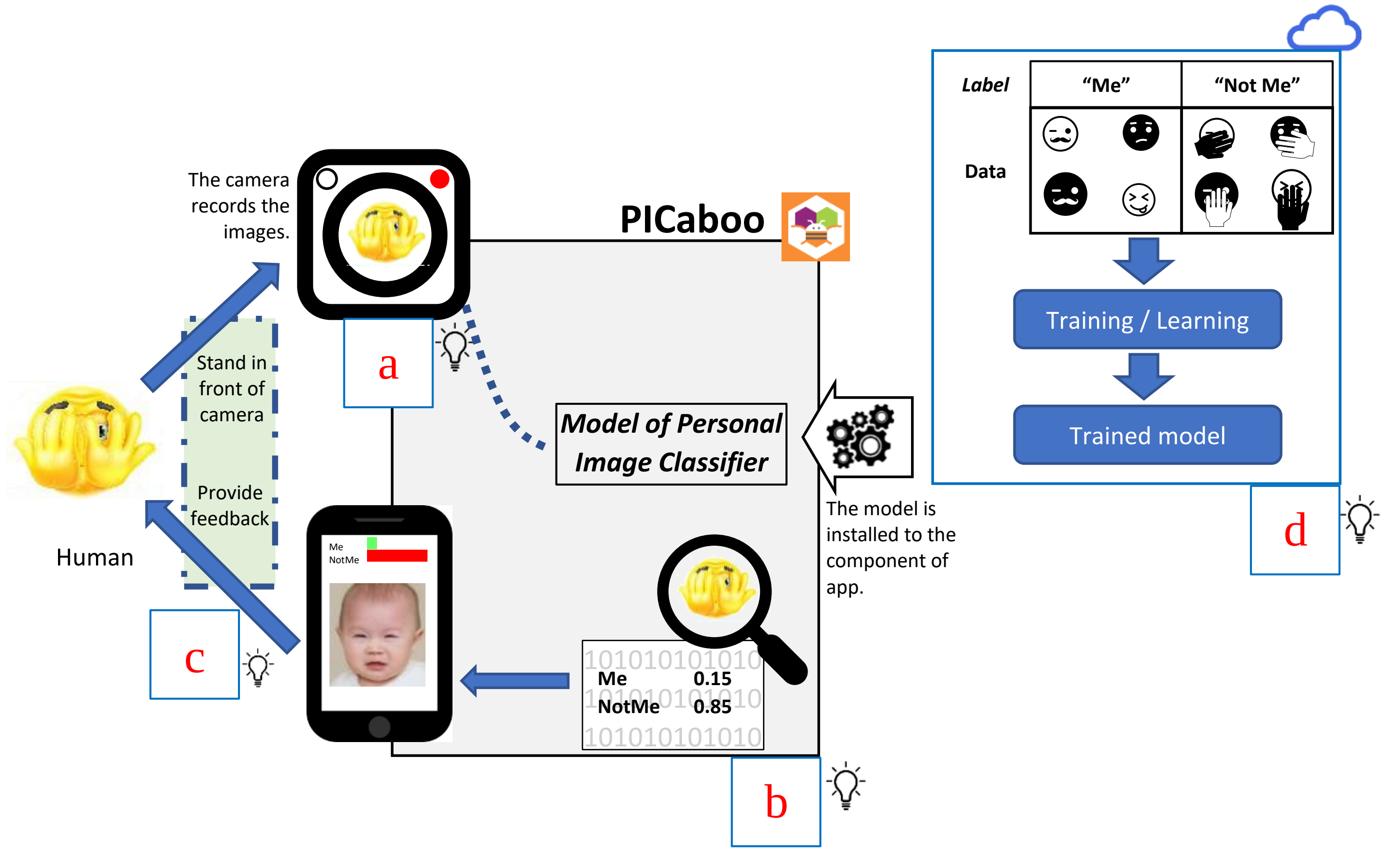
Societal Impact

How will our lives be helped when a computer can classify images by itself?

(Any reasonable answers are welcome.)

2. See the workflow of the PICaboo app again, and fill in the boxes of 💡 with the English alphabets of options provided.

a. Perception	b. Representation & Reasoning	c. Natural Interaction	d. Learning



3. Below is an AI security software. Please fill the 5 Big Ideas of AI to the relevant boxes about the works of software.

a. Perception	b. Representation & Reasoning	c. Learning	d. Natural Interaction	e. Societal Impact

(1)

The software is trained by numerous examples of images and speeches in the production process.

c

(2)

The software tracks the face and records the speeches of visitors at the entrance.

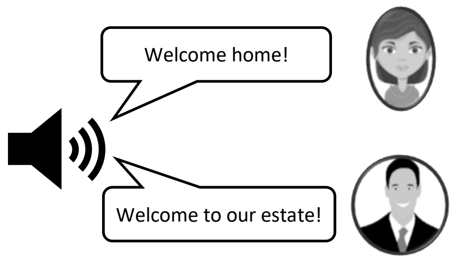
a

(3)

The software classifies the visitors to "resident" or "guest" by their images and speeches.

b

(4)



The software plays the voice file "Welcome home!" to the resident, and "Welcome to our estate!" to the guest with taking a photo for registering.

d

(5)

The software increases the accuracy of security, but also raises worries among the residents about their personal privacy.

e