Name_____ Group Members_____

Build a Bot Research

Instructions:

1. Choose a sense! (examples below)
    a. Vision
    b. Touch
    c. Hearing
    d. Echolocation
    e. Infrared Sensing

2. Take some time to fill out the research guide below for your sense.

    a. Make sure you detail how it works in humans or animals.
    b. Be detailed! You want to know how this works inside and out.
        i. What organs are involved?

        ii. How are the signals sent?

        iii. What does this look like for the organism? (Draw a model or diagram)

Build a Bot Evaluation

Part 1: Reflect on Your Own Project

1. What sensory system did your group choose to research?

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2. How could an AI organism mimic that sensory system? (Brief description)

3. Do AI systems already exist that detect or uses these “senses”?

4. After you have built your bot: What are you most proud of in your project? What did you do well? What was the most interesting part of the project?

5. What was the most challenging part of creating your AI organism?

Part 2: Peer Review

Student/Group #1

Names: _____

- What sense does their AI organism mimic?
- One thing I liked:
- One question or suggestion to improve:

Accuracy Data:

Correct Identifications	Incorrect Identifications

% Correct (Total # correct / Total number of ID trials) _____

Student/Group #2

Names: _____

- One thing I liked:
- One question or suggestion to improve:

Accuracy Data:

Correct Identifications	Incorrect Identifications

% Correct (Total # correct / Total number of ID trials) _____

Student/Group #3

Names: _____

- One thing I liked:
- One question or suggestion to improve:

Accuracy Data:

Correct Identifications	Incorrect Identifications

% Correct (Total # correct / Total number of ID trials) _____

Part 3: Final Thoughts

1. What's one idea from another project that you found interesting or inspiring?

2. If you had more time or resources, what would you add or change in your own project?

3. What changes need to be made?

4. What made successful models successful?
5. What feedback did others give you about your model?

6. What practical applications can you think of for this type of AI bot? Why would we want something that could auto-detect images like this and sort them?

Part 4: Extension

1. Go back to teachable machine and choose one of the other models to create a bot (Audio or Poses)
2. Which did you choose? _____

3. What challenges did you have creating this bot? _____

4. What practical applications can you think of for this type of AI bot? Why would we want something that could auto-detect images like this and sort them?

Part 5: Presentation

1. Take the data collected from the testing of your bots, your experience designing your bot and knowledge of AI to create a presentation that shows your understanding of what you have learned from this experience and how this connects to our knowledge of the nervous system
2. Parts of your presentation should include
    a. Description of AI bot and your process of making it
    b. Description of Accuracy data from people who tested your bot
    c. Reflection of what changes need to be made
    d. Practical applications for this type of bot
    e. Description of how this connects to nervous system
3. This should be colorful and well put together.
4. The presentation should be no more than 10 slides and last about 10 minutes.
5. Follow the rubric below.

Build-A-Bot Project Presentation

Created with ChatGPT

Student Name: _____Group Members: _____

✅ Evaluation Categories

1. AI Organism Design – Sensory System Representation
☐ **4 – Excellent:** Clearly represents a sensory system; creative and accurate components (input, processing, output)
☐ **3 – Good:** Represents a sensory system; mostly complete and thoughtful
☐ **2 – Developing:** Some attempt at a sensory system; missing or unclear parts
☐ **1 – Needs Improvement:** Incomplete or not clearly related to a sensory system

2. Connection to the Human Nervous System
☐ **4 – Excellent:** Strong, accurate connection to human sensory/nervous system; clearly explains biological processes
☐ **3 – Good:** Makes a connection with a mostly accurate explanation
☐ **2 – Developing:** Attempted connection; explanation lacks depth or clarity
☐ **1 – Needs Improvement:** No clear connection or inaccurate information

3. Presentation Skills
☐ **4 – Excellent:** Clear, confident speaker(s); well-explained and engaging, all members participate
☐ **3 – Good:** Clear explanation with some engagement
☐ **2 – Developing:** Basic explanation; parts unclear
☐ **1 – Needs Improvement:** Hard to understand or not presented

4. Visual Communication (Diagram or Model)
☐ **4 – Excellent:** Neat, labeled, and visually engaging
☐ **3 – Good:** Mostly clear and labeled
☐ **2 – Developing:** Somewhat messy or missing parts
☐ **1 – Needs Improvement:** Messy, unclear, or missing

5. Written Reflection
☐ **4 – Excellent:** Thoughtful responses; shows deep understanding
☐ **3 – Good:** Complete responses with reflection
☐ **2 – Developing:** Basic or brief reflection
☐ **1 – Needs Improvement:** Incomplete or missing

6. Peer Feedback
☐ **4 – Excellent:** Gave meaningful, kind, specific feedback to 3+ peers
☐ **3 – Good:** Gave thoughtful feedback to 2–3 peers
☐ **2 – Developing:** Gave vague or incomplete feedback
☐ **1 – Needs Improvement:** Did not give feedback

7. Effort & Collaboration
☐ **4 – Excellent:** Fully engaged, respectful, contributed equally
☐ **3 – Good:** Participated and stayed on task most of the time
☐ **2 – Developing:** Some effort; occasionally off-task
☐ **1 – Needs Improvement:** Little effort or disrupted group work

🔢 **Total Score: _____ / 28**

📝 **Teacher Comments:**