

What We Learn in This Course

Answers do not need to be exact words below for some of them, as long as they are conveying a similar message.

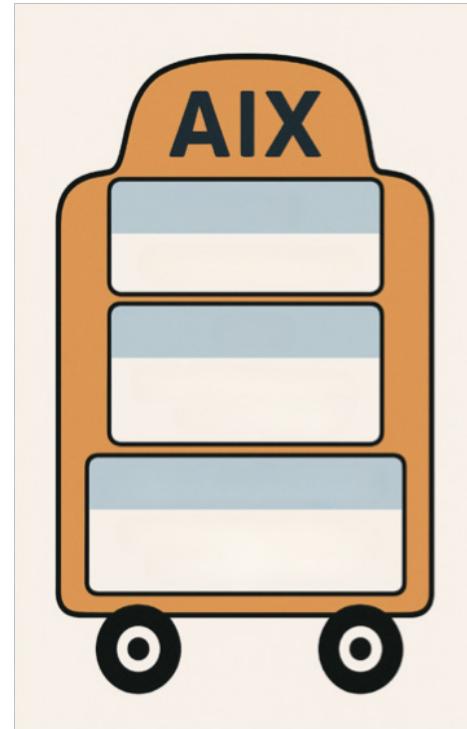
1. Who is responsible for designing the in-car AI experience to ensure passenger trust, comfort, and safety in autonomous vehicles?
 - **Answer:** Designing the in-car AI experience should be a collaborative effort. UX/UI designers, AI engineers, behavioral scientists, ethicists, and automotive safety experts are all included. Designers lead the creation of the user-facing interface and interactions.
2. How can designers use inputs like voice, in-car cameras, and AR to create a more intuitive and reassuring user experience for passengers?
 - **Answer:** Designers can use voice to explain what the car is doing, cameras to notice how passengers feel, and AR to show helpful info.
3. How can designers make sure AI sees and treats pedestrians as people, not just objects?
 - **Answer:** Designers can use diverse data to show the AI sees people, not just objects. Interfaces should reflect awareness and care, helping passengers and pedestrians feel seen and safe.
4. AIX Framework Layers are shown below. What are they?

- **Answer:**

First Layer:

Second Layer:

Third Layer:



5. Why does the type of AI matter for design?

- **Answer:** The type of AI tells us if it's traditional AI like Machine Learning that learns from historical data, or generative AI that creates new content. It also tells us what kind of data it uses, like computer vision with images or NLP with words and language.

6. What should designers do when AI confidently gives wrong answers without knowing it's making a mistake while designing the AV?

- **Answer:** Designers should expect mistakes and have the AI confirm with the user before acting. This helps catch errors and builds trust.

7. Why is it important to design Voice AI with the user's dignity in mind?

- **Answer:** Voice feels human, so people forget it's AI. Designers should avoid bias and make sure voice AI respects all users.

8. What is AIX?

- **Answer:** AIX is the design of Artificial Intelligence focused on creating a human-centric design using data and AI

9. How does Computer Vision AI affect design and bias?

- **Answer:** Computer Vision works with pictures and movement, so design is more visual. But it can also show biases in what the AI notices.

10. Give an example of MLUX for AVs

- **Answer:** Climate control in the car, recommendations of songs, and sensors collecting our driving patterns

11. What is an example of data consent that a designer may have to be aware of?

- **Answer:** Getting permission from the driver to collect their driving behavior data

12. How can a designer incorporate MLUX when designing AVs?

- **Answer:** By considering the empathy map of a user, the designer gets to set the personality of the AI.

13. You are designing an AV list, and some characteristics your AV should have.

- **Answer:** Character and personality that display Communication (listening to the user's needs) and inclusion

14. Give an example of where a designer must be aware of an AI making false predictions.

- **Answer:** Drowsy detection system gives false negatives when the driver is not drowsy.

15. What is an example of an ADAS feature design in AVs?

- **Answer:** Lane Assist, Drowsy Detection System, even when the car warning system goes off, if the users do not have their seatbelts on

- 16.** How can we ethically think of the AI layer when using the AIX framework to design our AVs?
- **Answer:** The AI Layer is where alerts to the driver occur. We can do this by allowing our users to turn these features off rather than invading their privacy without permission.
- 17.** Give an example of human-centric design that keeps the user in mind while they are driving.
- **Answer:** Showing software updates when the car is not in motion
- 18.** In the AI Character layer, what values can a designer add to personalize the AI to the user?
- **Answer:** Gender, name, personality, tone, etc.
- 19.** List some AV features you can think of that would fall under human-centric design.
- 20.** Design your own AV with some of the answers you've listed above. What would that interface look like?