CLAIMS:

1. An interactive portrait system, comprising:

a camera configured to capture imagery of an environment; and

a controller configured to:

analyze the imagery to identify a guest in the environment;

instruct an output device to provide an initial output to attempt to interact with the guest;

analyze the imagery to identify a behavior of the guest during the initial output, after the initial output, or both;

evaluate the behavior of the guest using one or more artificial intelligence algorithms to determine whether the guest responded to the initial output;

in response to determining that the guest responded to the initial output, instruct the output device to provide an additional output to continue to attempt to interact with the guest; and

in response to determining that the guest failed to respond to the initial output:

block the output device from providing the additional output;

analyze the imagery to identify an additional guest in the environment; and

instruct the output device to provide a respective initial output to attempt to interact with the additional guest.

2. The interactive portrait system of claim 1, wherein the initial output comprises a first animation of a first type of object or character, and the additional output

comprises a second animation of a second type of object or character that is different from the first type of object or character.

3. The interactive portrait system of claim 1, wherein the initial output comprises a first animation, the additional output comprises a second animation, and the second animation is larger than the first animation.

4. The interactive portrait system of claim 1, wherein the initial output comprises a first sound, the additional output comprises a second sound, and the first sound has a lower volume than the second sound.

5. The interactive portrait system of claim 1, wherein the controller is configured to analyze the imagery to identify one or more characteristics of the guest, and the initial output, the additional output, or both are based on the one or more characteristics of the guest.

6. The interactive portrait system of claim 1, wherein the behavior comprises the guest turning their head toward the output device, focusing their gaze on or near the output device, standing in front of the output device, walking toward the output device, or any combination thereof.

7. The interactive portrait system of claim 1, comprising a communication device communicatively coupled to the controller, wherein the communication device is configured to communicate with a portable object carried by the guest to retrieve an identifier from the portable object.

8. The interactive portrait system of claim 7, wherein the controller is configured to use the identifier to search a database for achievements associated with the identifier, and the initial output, the additional output, or both are based on the achievements associated with the identifier.

9. The interactive portrait system of claim 1, wherein the controller is configured to use the one or more artificial intelligence algorithms to provide the initial output, the additional output, or both in a manner that is personalized for the guest based on the imagery.

10. An entertainment venue, comprising:

a path that traverses an interactive area;

a display and a speaker located proximate to the interactive area;

a camera configured to capture imagery of the interactive area;

a microphone configured to capture sounds within the interactive area; and

a controller configured to:

analyze the imagery to identify a guest traveling along the path toward the interactive area;

instruct the display, the speaker, or both to provide an initial output to attempt to interact with the guest as the guest approaches the interactive area;

analyze the imagery, the sounds, or both to identify a behavior of the guest during the initial output, after the initial output, or both;

evaluate the behavior of the guest using one or more artificial intelligence algorithms to determine whether the guest responded to the initial output; and

in response to determining that the guest responded to the initial output, instruct the display and the speaker to provide an additional output to conduct a conversational interaction with the guest.

11. The entertainment venue of claim 10, wherein the initial output comprises a first animation, the additional output comprises a second animation, and the second animation is larger than the first animation.

12. The entertainment venue of claim 10, wherein the initial output comprises a first sound, the additional output comprises a second sound, and the first sound is quieter than the second sound.

13. The entertainment venue of claim 10, wherein the controller is configured to analyze the imagery to identify one or more characteristics of the guest, and the initial output, the additional output, or both are based on the one or more characteristics of the guest.

14. The entertainment venue of claim 10, wherein the behavior comprises:

the guest turning their head toward the display, the speaker, or both;

the guest focusing their gaze on or near the display, the speaker, or both;

the guest speaking words or phrases related to the initial output; or

any combination thereof.

15. The entertainment venue of claim 10, comprising a communication device communicatively coupled to the controller;

wherein the communication device is configured to communicate with a portable object carried by the guest to retrieve an identifier from the portable object;

wherein the controller is configured to use the identifier to search a database for achievements associated with the identifier;

wherein the initial output, the additional output, or both are based on the achievements associated with the identifier.

16. The entertainment venue of claim 10, wherein the controller is configured to use the one or more artificial intelligence algorithms to carry out the conversational interaction.

17. A method of operating an interactive portrait system in an entertainment venue, the method comprising:

analyzing, using one or more processors, imagery captured by a camera to identify a behavior of a guest as the guest travels along a path that traverses an interactive area of the entertainment venue;

evaluating, using the one or more processors, the behavior of the guest to determine whether the guest demonstrated signs of interest in the interactive area of the entertainment venue;

analyzing, using the one or more processors, the imagery to identify one or more characteristics of one or more items worn or carried by the guest;

in response to determining that the guest demonstrated signs of interest in the interactive area of the entertainment venue and using the one or more processors, instructing an output device to provide an initial output to attempt to interact with the guest as the guest approaches the interactive area of the entertainment venue, wherein the initial output is based on the one or more characteristics of the one or more items worn or carried by the guest;

evaluating, using the one or more processors, the behavior of the guest during the initial output, after the initial output, or both to determine whether the guest responded to the initial output; and

in response to determining that the guest responded to the initial output and using the one or more processors, instructing the output device to provide an additional output to conduct a conversational interaction with the guest.

18. The method of claim 17, wherein:

the one or more items comprise clothing worn by the guest, an accessory worn by the guest;

a personal possession carried by the guest, or any combination thereof; and

the one or more characteristics comprise a color, a type, a print, or any combination thereof.

19. The method of claim 17, comprising evaluating, using the one or more processors, the behavior of the guest using one or more artificial intelligence algorithms.

20. The method of claim 17, comprising analyzing, using one or more processors, sounds captured by a microphone to identify the behavior of the guest.

21. An interactive system, comprising:

a camera configured to capture imagery of an environment over time; and

a controller configured to:

analyze a first portion of the imagery to identify a guest in the environment;

instruct an output device to provide an initial output to attempt to interact with the guest;

analyze a second portion of the imagery to determine whether the guest responded to the initial output;

in response to determining that the guest responded to the initial output, instruct the output device to provide a guest-specific additional output; and

in response to determining that the guest failed to respond to the initial output, block the output device from providing the guest-specific additional output.

22. The interactive system of claim 21, comprising a communication device communicatively coupled to the controller, wherein the communication device is

configured to communicate with a portable object carried by the guest to retrieve an identifier from the portable object, and the controller is configured to:

use the identifier to search a database for a preferred animation associated with the identifier, wherein the guest-specific additional output comprises an animation that corresponds to the preferred animation.

23. The interactive system of claim 21, comprising a communication device communicatively coupled to the controller, wherein the communication device is configured to communicate with a portable object carried by the guest to retrieve an identifier from the portable object, and the controller is configured to:

use the identifier to search a database for achievements associated with the identifier, wherein the guest-specific additional output is based on the achievements associated with the identifier.

24. The interactive system of claim 21, wherein the controller is configured to analyze the first portion of the imagery to identify one or more characteristics of the guest, and the guest-specific additional output is based on the one or more characteristics of the guest.

25. The interactive system of claim 24, wherein the one or more characteristics comprise a clothing color of clothing worn by the guest, a clothing type of the clothing worn by the guest, a symbol on the clothing worn by the guest, a print on the clothing worn by the guest, accessories worn by the guest, a personal possession carried by the guest, or any combination thereof.

26. The interactive system of claim 21, wherein the controller is configured to analyze the second portion of the imagery to determine that the guest responded to the initial output based on the guest turning their head toward the output device, focusing their

gaze on or near the output device, standing in front of the output device, walking toward the output device, or any combination thereof.

27. The interactive system of claim 21, wherein the controller is configured to, in response to determining that the guest failed to respond to the initial output:

analyze a third portion of the imagery to identify an additional guest in the environment; and

instruct the output device to provide the initial output or another initial output to attempt to interact with the additional guest.

28. The interactive system of claim 21, wherein the initial output comprises a guest-specific initial output.

29. The interactive system of claim 21, wherein the output device comprises a display and a speaker to provide visual components and audible components in the initial output, the guest-specific additional output, or both.

30. The interactive system of claim 21, wherein the controller is configured to analyze the first portion of the imagery to identify the guest traveling along a path in the environment toward the output device, and to instruct the output device to provide the initial output to attempt to interact with the guest as the guest approaches the output device.

31. The interactive system of claim 21, wherein the guest-specific additional output comprises a conversational interaction with the guest, and the controller is configured to use one or more artificial intelligence algorithms to carry out the conversational interaction with the guest.

32. An interactive system, comprising:

a controller configured to:

instruct an output device to provide an initial output to attempt to interact with one or more guests in an environment;

analyze imagery received from one or more cameras to determine whether at least one guest of the one or more guests responded to the initial output;

in response to determining that the at least one guest of the one or more guests responded to the initial output, instruct the output device to provide an enhanced additional output; and

in response to determining that the one or more guests failed to respond to the initial output, block the output device from providing the enhanced additional output.

33. The interactive system of claim 32, wherein the controller is configured to analyze sounds received from one or more microphones to determine whether the at least one guest of the one or more guests responded to the initial output.

34. The interactive system of claim 32, wherein the initial output, the enhanced additional output, or both are based on one or more characteristics of the one or more guests, and the controller is configured to identify the one or more characteristics of the one or more guests based on the imagery, based on one or more identifiers received via radiofrequency communication with one or more portable objects carried by the one or more guests, or any combination thereof.

35. The interactive system of claim 32, wherein the controller is configured to carry out multi-stage engagement with the one or more guests and to:

use computer vision to gather initial information from the imagery received from the one or more cameras in response to the one or more guests entering a field of view of the one or more cameras; and

use the initial information to determine whether the at least one guest of the one or more guests responded to the initial output, to provide the initial output, or both.

36. The interactive system of claim 35, wherein the controller is configured to carry out the multi-stage engagement with the one or more guests and to:

use radiofrequency communication to gather additional information from one or more portable objects carried by the one or more guests in response to the one or more guests entering a communication range of a radiofrequency reader; and

use the additional information to determine whether the at least one guest of the one or more guests responded to the initial output, to provide the initial output, to provide the enhanced additional output, or any combination thereof.

37. The interactive system of claim 32, wherein the enhanced additional output comprises a conversational interaction with the at least one guest of the one or more guests, and the controller is configured to use one or more artificial intelligence algorithms to carry out the conversational interaction with the at least one guest of the one or more guests.

38. The interactive system of claim 32, wherein the initial output is not guest-specific and is selected from a plurality of available initial outputs based on a rotation schedule.

39. A method of operating an interactive system, the method comprising:

instructing, using one or more processors, an output device to provide an initial output to attempt to interact with one or more guests in an environment;

analyzing, using one or more processors, imagery captured by a camera to determine whether at least one guest of the one or more guests demonstrated signs of interest in the initial output; and

in response to determining that the at least one guest of the one or more guests demonstrated signs of interest in the initial output and using the one or more processors, instructing the output device to provide a guest-specific additional output to attempt to continue to attempt to interact with the at least one guest of the one or more guests.

40. The method of claim 39, comprising:

instructing, using the one or more processors and one or more artificial intelligence algorithms, the output device to carry out a conversational interaction with the at least one guest of the one or more guests to provide the guest-specific additional output.