CLAIMS:

1. A guest measurement system, comprising:

one or more cameras configured to generate image data indicative of guest characteristics in an attraction measurement area of an individual attraction within an amusement park, wherein the image data comprises an image of a reference marker in the attraction measurement area;

a controller configured to receive the image data indicative of the guest characteristics from the one or more cameras, the controller comprising a processor configured to:

cause display of the image on a graphical user interface;

identify anatomical features of the guest in the image data;

identify the reference marker in the image data;

generate indicators of the identified anatomical features overlaid on the displayed image;

receive user input, via the graphical user interface, adjusting one or more positions of the indicators on displayed image relative to the identified anatomical features;

generate updated identified anatomical features based on the user input;

scale distances between the updated identified anatomical features in the image data from a virtual space of the image data to a real-world space using the reference marker in the image data; and

generate a guest height calculation based on the scaled distances between the updated identified anatomical features.

2. The guest measurement system of claim 1, wherein the one or more cameras are coupled to a portable user device.

3. The guest measurement system of claim 2, wherein the portable user device is a tablet or mobile device.

4. The guest measurement system of claim 2, wherein the graphical user interface is configured to:

receive a second user input confirming that the indicators are at locations corresponding to the identified anatomical features after the updating; and wherein the processor is configured to generate the guest height calculation responsive to receiving the second user input.

5. The guest measurement system of claim 1, wherein the identified guest anatomical features comprise a head, a shoulder, and a hip.

6. The guest measurement system of claim 7, wherein the processor is configured to:
identify a floor or ground in the image data; and
use a location of the floor or ground to determine the guest height calculation.

7. The guest measurement system of claim 1, wherein the processor is configured to:
access real-world measurements of the reference marker; and
using a relationship between features of the reference marker in the image data and the real-world measurements of the reference marker to generate a scaling function; and
scale the distances between the identified anatomical features in the image data to the real-world space using the scaling function.

8. The guest measurement system of claim 9, wherein the real-world measurements represent a planar section of the reference marker, wherein the planar section corresponds to a plane of the image data.

9. The guest measurement system of claim 1, wherein the reference marker is a QR code.

10. A method of measuring a guest in an attraction measurement area comprising:
receiving image data indicative of guest characteristics from one or more cameras;
displaying the image on a graphical user interface;
identifying anatomical features of the guest in the image data;
identifying a reference marker in the image data;
generating indicators of the identified anatomical features overlaid on the displayed image;
receiving user input, via the graphical user interface, adjusting one or more positions of the indicators on displayed image relative to the identified anatomical features;
generating updated identified anatomical features based on the user input;
scaling distances between the updated identified anatomical features in the image data from a virtual space of the image data to a real-world space using the reference marker in the image data; and
generating a guest height calculation based on the scaled distances between the updated identified anatomical features.

11. The method of claim 12, further comprising accessing real-world measurements of the reference marker and using the real-world measurements and features of the reference marker in the image data to generate a scaling function.

12. The method of claim 13, wherein scaling the distances comprises using the scaling function.

13. The method of claim 12, further comprising displaying the guest height calculation.

14. The method of claim 12, determining an eligibility of the guest for an attraction of an amusement park based on the guest height calculation.

15. A guest measurement device, comprising:

one or more cameras configured to generate sensor signals comprising image data indicative of guest characteristics in an attraction measurement area of an individual attraction within an amusement park;

a controller configured to receive the sensor signals indicative of the guest characteristics from the one or more cameras, the controller comprising a processor configured to:

cause display of the image on a graphical user interface;

identify anatomical features of the guest in the image data;

identify a reference marker in the image data;

generate indicators of the identified anatomical features overlaid on the displayed image;

receive user input, via the graphical user interface, adjusting one or more positions of the indicators on displayed image relative to the identified anatomical features;

generate updated identified anatomical features based on the user input;

scale distances between the updated identified anatomical features in the image data from a virtual space of the image data to a real-world space using the reference marker in the image data; and

generate a guest height calculation based on the scaled distances between the updated identified anatomical features; and

a display configured to display an indication of the guest height calculation.

16. The guest measurement device of claim 17, wherein the graphical user interface is configured to:

receive a second user input confirming locations of the ~~graphical~~ indicators after updating the location, wherein the scaled distances between the identified anatomical features in the image data are based on distances between the confirmed locations.

17. The guest measurement device of claim 19, wherein the user input drags at least one of the indicators ~~graphical indicator~~ to the updated location.

18. The guest measurement system of claim 1, wherein the identified anatomical features comprise a top of head position of the guest in the image and wherein the updated identified anatomical features comprise an adjusted top of head position.

19. The guest measurement system of claim 21, wherein the adjusted top of head position is lower or higher than the ~~identified~~ top of head position.

20. The guest measurement system of claim 1, wherein the indicators align with respective identified anatomical features in the image.

21. A method of measuring a guest in an attraction measurement area comprising:

receiving first image data indicative of a first set of guest characteristics from one or more cameras;

training a machine learning model to identify anatomical features using the first image data;

receiving second image data indicative of a second set of guest characteristics and a reference marker from one or more cameras;

applying the machine learning model to the second image data to identify the anatomical features of a guest in the second image data;

scaling one or more distances between the anatomical features in the second image data from a virtual space of the second image data to a real-world space using the reference marker in the second image data; and

generating a guest height calculation based on the one or more distances between the anatomical features.

22. The method of claim 21, wherein the machine learning model comprises a neural network.

23. The method of claim 21, wherein an output of applying the machine learning model comprises identifying a head, eyes, mouth, nose, eyebrows, shoulders, limbs, waist, hands, feet, or any combination thereof.

24. The method of claim 21, further comprising accessing real-world measurements of the reference marker and using the real-world measurements and features of the reference marker in the second image data to generate a scaling function.

25. The method of claim 24, wherein scaling the distances comprises using the scaling function.

26. The method of claim 21, further comprising displaying the guest height calculation.

27. The method of claim 21, further comprising determining an eligibility of the guest for an attraction of an amusement park based on the guest height calculation.

28. A guest measurement device, comprising:

one or more cameras configured to generate sensor signals comprising image data indicative of guest characteristics in an attraction measurement area; and

a controller configured to receive the sensor signals indicative of the guest characteristics from the one or more cameras, the controller comprising a processor configured to:

identify anatomical features of a guest and a reference marker in the image data;

generate one or more estimated positions of the anatomical features;

receive input from a user adjusting the one or more estimated positions of the anatomical features;

generate one or more updated positions of the anatomical features based on the input;

scale one or more distances between the one or more updated positions of the anatomical features in the image data from a virtual space of the image data to a real-world space using the reference marker in the image data; and

generate a guest height calculation based on the one or more distances between the one or more updated positions of the anatomical features.

29. The guest measurement device of claim 28, wherein the anatomical features comprise a top of head position of the guest.

30. The guest measurement device of claim 29, wherein the one or more updated positions comprise an adjusted top of head position that is lower or higher than an estimated top of head position based on the input.

31. The guest measurement device of claim 28, wherein the input is received via a graphical user interface.

32. The guest measurement device of claim 28, wherein the input comprises repositioning via dragging, arrow down, hand or gaze gestures, voice commands, or any combination thereof.

33. A guest measurement system, comprising:

one or more cameras configured to generate image data in an attraction measurement area, wherein the image data comprises an image of a reference marker in the attraction measurement area; and

a controller configured to receive the image data from the one or more cameras, the controller comprising a processor configured to:

identify anatomical features of a guest in the image data;

identify the reference marker in the image data;

receive input from a user adjusting one or more positions of the anatomical features;

finalize positions of the identified anatomical features based on the input;

scale one or more distances between the finalized position of the identified anatomical features in the image data from a virtual space of the image data to a real-world space using the reference marker in the image data; and

generate a guest height calculation based on the scaled one or more distances.

34. The guest measurement system of claim 33, wherein the one or more cameras are coupled to a portable user device.

35. The guest measurement system of claim 34, wherein the portable user device is a tablet or mobile device.

36. The guest measurement system of claim 33, wherein the anatomical features of the guest comprise a head, a shoulder, and a hip.

37. The guest measurement system of claim 33, wherein the processor is configured to:

identify a floor or ground in the image data; and

use a location of the floor or ground to determine the guest height calculation.

38. The guest measurement system of claim 33, wherein the processor is configured to:

access real-world measurements of the reference marker; and

use a relationship between features of the reference marker in the image data and the real-world measurements of the reference marker to generate a scaling function; and

scale the one or more distances using the scaling function.

39. The guest measurement system of claim 38, wherein the real-world measurements represent a planar section of the reference marker, wherein the planar section corresponds to a plane of the image data.

40. The guest measurement system of claim 33, wherein the reference marker is a QR code.