

CLAIMS

1. A computer-implemented method for resolving an anaphora, the method comprising:
 - extracting individual context data from an individual expression;
 - determining whether the individual expression includes an anaphora representation based on the individual context data;
 - based on determining that the individual expression includes the anaphora representation, extracting anaphora context data; and
 - identifying an object of one or more objects to which the anaphora representation refers based on comparing the individual context data and the anaphora context data to data detailing the one or more objects.
2. The method of claim 1, wherein identifying the object of the one or more objects to which the anaphora representation refers further comprises:
 - extracting metadata corresponding to the one or more objects; and
 - comparing the metadata corresponding to the one or more objects to the individual context data and the anaphora context data.
3. The method of claim 2, further comprising:
 - determining an object match score for each comparison of the metadata to the individual context data and the anaphora context data; and
 - determining an overall object match score for each of the one or more objects as it relates to resolving the anaphora representation.
4. The method of claim 3, wherein determining the overall object match score for each of the one or more objects as it relates to resolving the anaphora representation further comprises:
 - generating a model that weights each comparison;
 - multiplying the weight by the comparison; and
 - summing the product of the multiplied, weighted comparisons.
5. The method of claim 1, wherein the anaphora context data includes data selected from a group comprising an object color, an object shape, an object placement, an object size, and an object time.
6. The method of claim 1, wherein the individual context data includes data selected from a group comprising a number of individuals within an environment, identities of the individuals, individuals identified as speaking, relative positions of the individuals, groupings of the individuals, orientations of the individuals relative to the speaker, orientations of the individuals relative to one or more objects, and individual line of sight.

7. The method of claim 6, further comprising:
generating an individual profile for at least one individual generating the individual expression; and
wherein the individual context data includes the individual profile.
8. A computer program product for resolving an anaphora, the computer program product comprising:
one or more non-transitory computer-readable storage media and program instructions stored on the one or more non-transitory computer-readable storage media capable of performing a method, the method comprising:
extracting individual context data from an individual expression;
determining whether the individual expression includes an anaphora representation based on the individual context data;
based on determining that the individual expression includes the anaphora representation, extracting anaphora context data; and
identifying an object of one or more objects to which the anaphora representation refers based on comparing the individual context data and the anaphora context data to data detailing the one or more objects.
9. The computer program product of claim 8, wherein identifying the object of the one or more objects to which the anaphora representation refers further comprises:
extracting metadata corresponding to the one or more objects; and
comparing the metadata corresponding to the one or more objects to the individual context data and the anaphora context data.
10. The computer program product of claim 9, further comprising:
determining an object match score for each comparison of the metadata to the individual context data and the anaphora context data; and
determining an overall object match score for each of the one or more objects as it relates to resolving the anaphora representation.
11. The computer program product of claim 10, wherein determining the overall object match score for each of the one or more objects as it relates to resolving the anaphora representation further comprises:
generating a model that weights each comparison;
multiplying the weight by the comparison; and
summing the product of the multiplied, weighted comparisons.
12. The computer program product of claim 8, wherein the anaphora context data includes data selected from a group comprising an object color, an object shape, an object placement, an object size, and an object time.

13. The computer program product of claim 8, wherein the individual context data includes data selected from a group comprising a number of individuals within an environment, identities of the individuals, individuals identified as speaking, relative positions of the individuals, groupings of the individuals, orientations of the individuals relative to the speaker, orientations of the individuals relative to one or more objects, and individual line of sight.
14. The computer program product of claim 13, further comprising:
generating an individual profile for at least one individual generating the individual expression; and
wherein the individual context data includes the individual profile.
15. A computer system for resolving an anaphora, the system comprising:
one or more optical sensors, one or more strain gauge sensors, one or more microphones, one or more temperature sensors, and one or more batteries; one or more computer processors, one or more computer-readable storage media, and program instructions stored on the one or more of the computer-readable storage media for execution by at least one of the one or more processors capable of performing a method, the method comprising:
extracting individual context data from an individual expression;
determining whether the individual expression includes an anaphora representation based on the individual context data;
based on determining that the individual expression includes the anaphora representation, extracting anaphora context data; and
identifying an object of one or more objects to which the anaphora representation refers based on comparing the individual context data and the anaphora context data to data detailing the one or more objects.
16. The computer system of claim 15, wherein identifying the object of the one or more objects to which the anaphora representation refers further comprises:
extracting metadata corresponding to the one or more objects; and
comparing the metadata corresponding to the one or more objects to the individual context data and the anaphora context data.
17. The computer system of claim 16, further comprising:
determining an object match score for each comparison of the metadata to the individual context data and the anaphora context data; and
determining an overall object match score for each of the one or more objects as it relates to resolving the anaphora representation.
18. The computer system of claim 17, wherein determining the overall object match score for each of the one or more objects as it relates to resolving the anaphora representation further comprises:

generating a model that weights each comparison;
multiplying the weight by the comparison; and
summing the product of the multiplied, weighted comparisons.

19. The computer system of claim 15, wherein the anaphora context data includes data selected from a group comprising an object color, an object shape, an object placement, an object size, and an object time.

20. The computer system of claim 15, wherein the individual context data includes data selected from a group comprising a number of individuals within an environment, identities of the individuals, individuals identified as speaking, relative positions of the individuals, groupings of the individuals, orientations of the individuals relative to the speaker, orientations of the individuals relative to one or more objects, and individual line of sight.