

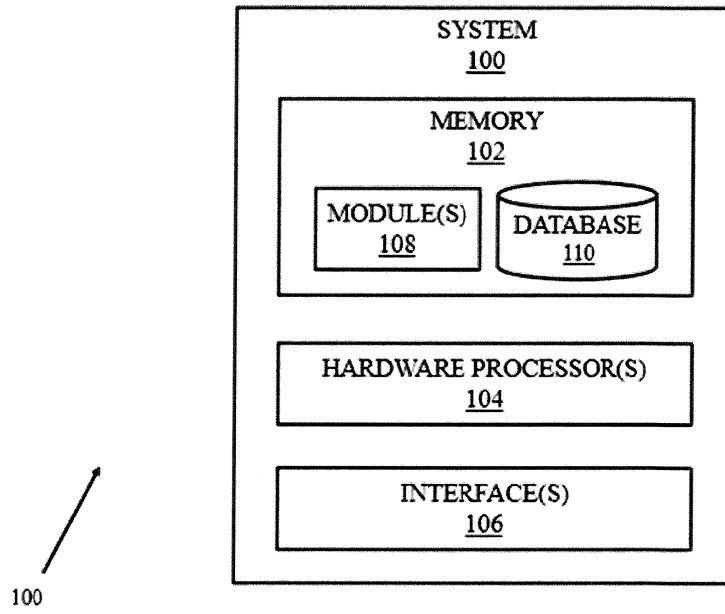


FIG. 1

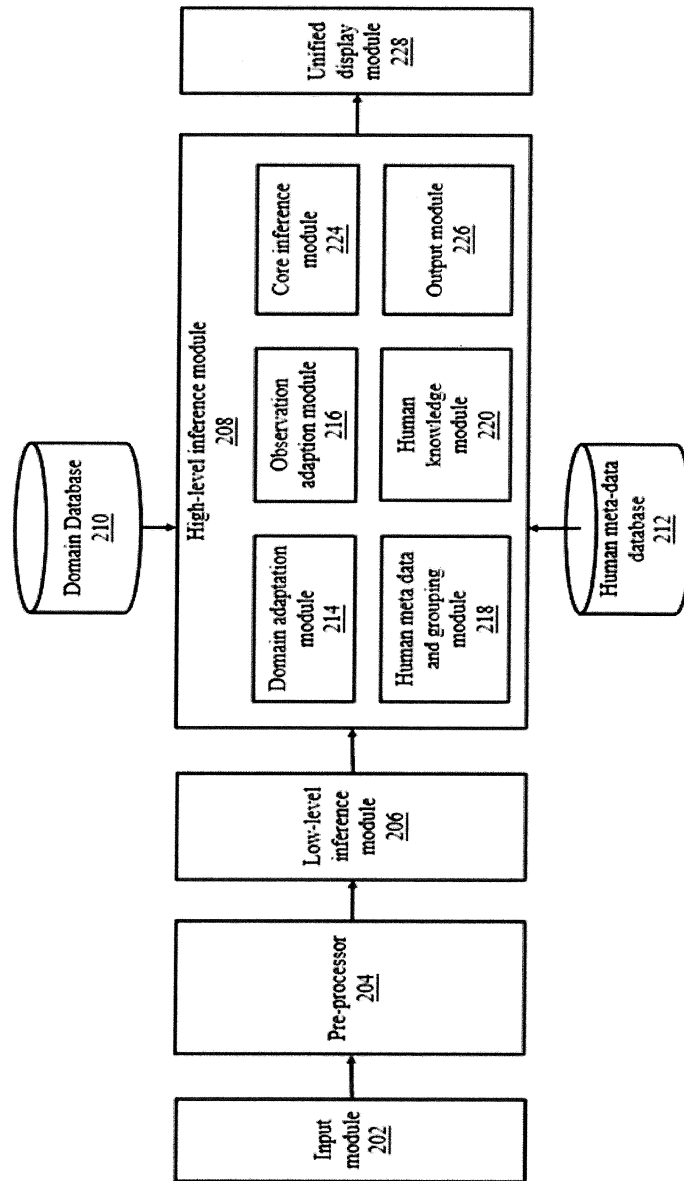


FIG. 2

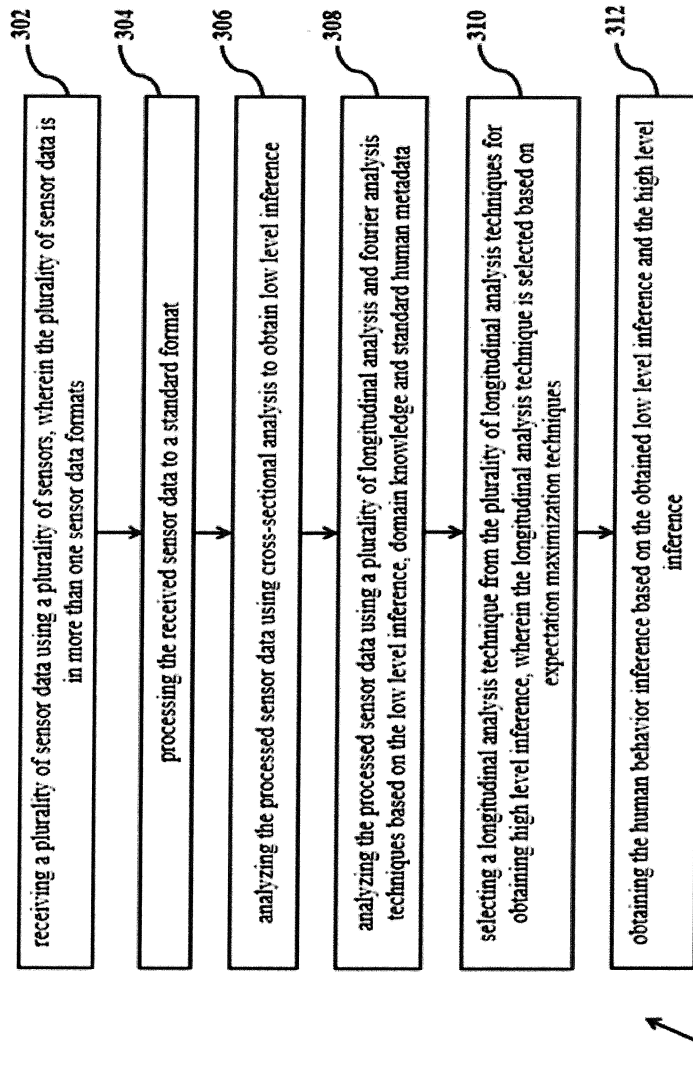


FIG. 3

| Use Case                                       | Sensors                                        | Low level inference      | High level inference      |
|------------------------------------------------|------------------------------------------------|--------------------------|---------------------------|
| Early MCI detection in ambient assisted living | PIR sensors, door contact and pill-box sensors | Daily and weekly routine | Mild cognitive impairment |

FIG. 4

| Use Case                   | Sensors                | Low level inference                       | High level inference |
|----------------------------|------------------------|-------------------------------------------|----------------------|
| Driver behaviour modelling | GPS , inertial sensors | Location, speed , lateral velocity , jerk | Harsh driving events |

FIG. 5

| Use Case                   | Sensors                                           | Low level inference                                                               | High level inference                                                           |
|----------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Cardiac fatigue monitoring | Accelerometer, gyroscope, barometer, PPG sensors. | Metabolic Equivalents (MET) values , heart rate, breathing-rate , breathing power | Computational model of cardiac fatigue per session of activity , cardiac care. |

FIG. 6

| Use Case                       | Sensors                                                 | Low level inference         | High level inference |
|--------------------------------|---------------------------------------------------------|-----------------------------|----------------------|
| Ubiquitous Journey recognition | GPS, Accelerometer, gyroscope, barometer, magnetometer. | Type of vehicle recognition | Journey recognition. |

FIG. 7