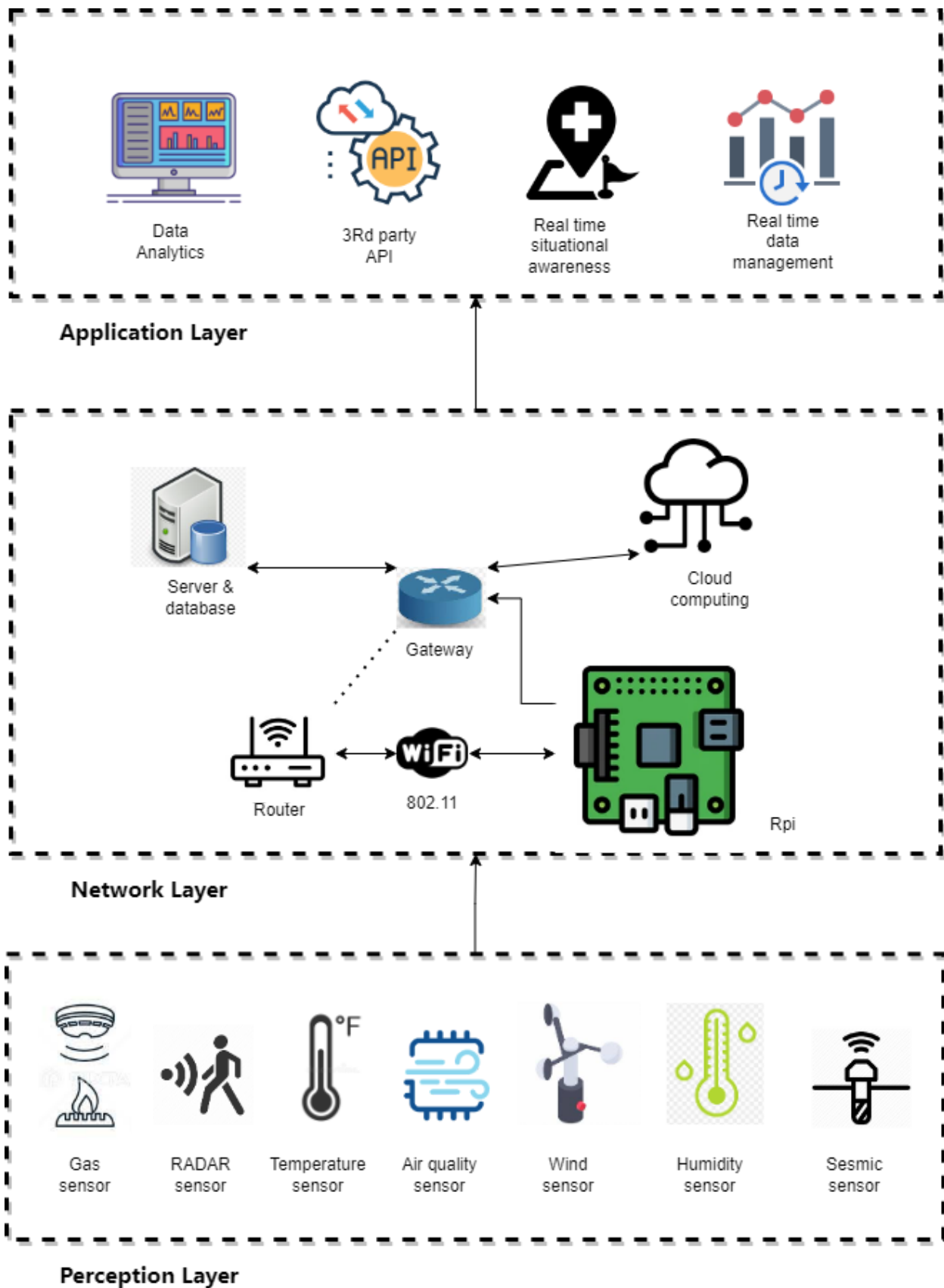


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#### Perception Layer:

The perception layer is the lowest layer of the architecture and comprises the sensors that collect data from the environment. This layer includes a range of sensors such as temperature sensor, air quality sensor, gas sensors, motion sensors, wind sensor and seismic sensor, which are deployed throughout the building to detect the presence of people, fire, hazardous gasses, and other external environments in emergency situations. The data collected by these sensors is then transmitted to the next layer for processing.

#### Network Layer:

The network layer is responsible for managing and processing the data collected by the perception layer. This layer includes edge devices, such as a raspberry pi, which can perform some data processing and filtering. This layer includes network devices such as gateways and routers which are responsible for aggregating and transmitting the data collected by the sensors to a server for storage and monitoring. Further data processing can be done with the help of cloud computing before transmitting to the next layer.

#### Application Layer:

The application layer is the topmost layer of the architecture and is responsible for providing insights and alerts based on the data collected by the lower layers. This layer includes applications and software tools that can analyze and manage data collected by the sensors to identify emergency situations, locate people who may be trapped or injured, and provide real-time alerts to rescue personnel. The data collected can be accessed by the media through a third party API. The applications in this layer can also provide visualizations and dashboards to help rescue personnel make informed decisions during a disaster.