Internet of Things Externship:

Assignment-1

Internet of things:

Applications and their Features:

1**.Smart Irrigation:**

*Features*: measures how much water the tree needs and provides that amount of water.

2.**Water Quality Management:**

*Features*: identify metrics such as total dissolved solids (TDS), bacteria, chlorine, electrical conductivity.

3.**Patient Surveillance/Remote Patient Monitoring:**

*Features*:patients hospital stay duration thanks to early diagnosis of complications,hospital readmissions.

4.**Supply Chain Control:**

*Features*:show the location of goods using GPS,track the speed of movement providing an accurate estimated time of arrival (ETA) for goods,monitor warehouse conditions such as temperature, humidity, light intensity, and other environmental factors.

5.**Connected Vehicles:**

*Features*:these vehicles provide GPS enabled location detection feature that helps them detect traffic congestions.

6.**Smart Grid:**

*Features*: increasing attention regarding climate change and carbon emissions, utilities focus on reducing energy consumption.

7.**Companion Robots:**

*Features*:Sensors detect objects that surround the robot and enable the robot to move.

8.**Sociometric badges:**

*Features*: measure the amount of face-to-face interaction, conversational time, physical proximity to other people, and physical activity levels using social signals derived from vocal features, body motion, and relative location.

9.**Fall Detection:**

*Features*: detect falls using geolocation data and summon help.

10.**Ultraviolet Radiation Monitoring:**

*Features*: measure UV sun rays to warn people not to be exposed in certain hours.

11.**Wearables:**

Virtual glasses, fitness bands.

*Features of Wearables*:to monitor calorie expenditure and heart beats, or GPS tracking belts.

12.**Noise Monitoring:**

*Features*: monitor noise levels,manage noise levels.

13.**Structural Health Monitoring:**

*Features*: predict structural damage, and prepare action plans for structures such as bridges, buildings, stadiums, ships, airplanes.

14.**Waste Management:**

*Features*: monitor fill levels for conventional bins and send the data to the relevant department of the city hall.

15.**Smart Factories:**

Industrial process automation/optimization,Energy Management,Enterprise Asset management.

*Features*:Increased operational efficiency,Better control over the sales lifecycle,More efficient safety and compliance checks,More responsive smart environment.

16.**Outdoor surveillance:**

*Features*: risk of crime is minimized.

17.**Remote Control Appliances:**

*Features*:turning on lights,starting the coffee maker,setting temperature,open up a music playlist,locking doors.

18.**Motion detection:**

*Features*: It streams homes/office videos and lets users receive alerts when it detects any activity.

19.**Smart lighting:**

*Features*: provide optimum lighting, street lighting systems can save up to 80% of the energy.

20.**Smart parking:**

*Features*:parking problems in a city can be minimized.