BON SECOURS COLLEGE FOR WOMEN

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PG Department of Computer Science

PG DEPARTMENT OF COMPUTER SCIENCE

1. <u>**Artificial Intelligence:**</u>
   - Artificial intelligence is the technology used for equipping computer systems with the ability to make decisions like humans.
   - Being one of the trending technologies, when AI programs are fed to systems, the aim is to mimic human intelligence for performing complex tasks such as pattern recognition, speech recognition, weather forecast and medical diagnosis.
   - AI is used in navigation based applications like Uber, voice assistants like Siri, video streaming services like Netflix, IoT devices and in search engines like Google and Bing.
   - AI helps in automating tasks such as traffic, scheduling trains, making business predictions and designing driverless cars.

2. <u>**Internet of Things**</u>

   - The (Internet of Things is a network of devices that are connected to each other.
   - Their devices can interact and share data with each other.
   - These devices may be connected via WiFi, and they share data about their environments and how they are being used.

- These devices have a computer chip that facilitates this exchange.
- For example, you lock doors of your car remotely& preheat your ovens and geysers.
- The Fit Bit that you use for tracking the number of calories you burn also runs on IoT technology.
- IoT chips embedded on machines help businesses to assess the performance of those machines and assist in their maintenance.

3. **Data Science**

- Next up in the list of latest technology concepts is not surprisingly Data Science.
- Data Science is the technology that helps to make sense of complicated data. You know that data is produced in a humungous amount every day by companies.
- This includes business data, sales data, customer profile information, server data, and financial figures.
- Most of this data is in the form of huge data sets that are unstructured.
- The role of data scientists is to convert these unstructured data sets into structured datasets. Then, these data sets can be analysed to identify patterns and trends.
- These patterns are useful for understanding the company's business performance, customer retention, and how these areas can be improved.

4. Edge Computing

- Edge computing is the latest technology trend that is getting famous by the day.
- The technology is based on the philosophy of bringing computing power as close to the data source.
- This helps in reducing bandwidth and latency.
- The technology aims to run fewer processes in the cloud and shifting those processes to locations such as the user's system or an edge server.
- Bridging this gap between the data and the computation reduces the long-distance communication between the server and the client, which in turn enhances the speed of the process.
- This is why edge computing is used for handling time-sensitive data stored in remote locations that have limited connectivity to the central location.
- The technology will make cloud computing and IoT devices faster.

5. Sensor

- Sensors have a very wide range, and there are many types, but fundamentally, sensors are devices that detect the feature quantity of a measurement object and convert this quantity into a readable signal, which is displayed on an instrument.
- And sensing technology, simply put, is a technology that uses sensors to acquire information by detecting the physical,

chemical, or biological property quantities and convert them into readable signal.

- There are a wide variety of sensors available for practically any industrial need. For demanding, mission-critical industrial applications, sensors can help improve processes, and offer unmatched asset protection.

- These sensors offer real-time monitoring, including detection and reporting, as needed by a process.

- Data monitored and collected by sensors is sent for control and analysis, and any anomaly in a particular property is reported by emitting an electrical signal by that sensor.