Department of Computer Science and Engineering

National Institute of Technology Delhi

VISION & MISSION

VISION

To communicate quality Computer Science Education for producing globally identifiable technocrats and entrepreneurs upholding sound ethics, profound knowledge, and innovative ideas to meet industrial and societal expectations.

MISSION

1. To impart value-based technical knowledge and skill relevant to Computer Science and Engineering through effective pedagogies and hands-on experience on the latest tools and technologies to maximize employability.
2. To strengthen multifaceted competence, nurture creativity and innovation and create entrepreneurial environment for an ever-changing technological scenario requiring communally cognizant solutions.
3. To create an appetite for research and higher education in contemporary and emerging areas of Computer Science.
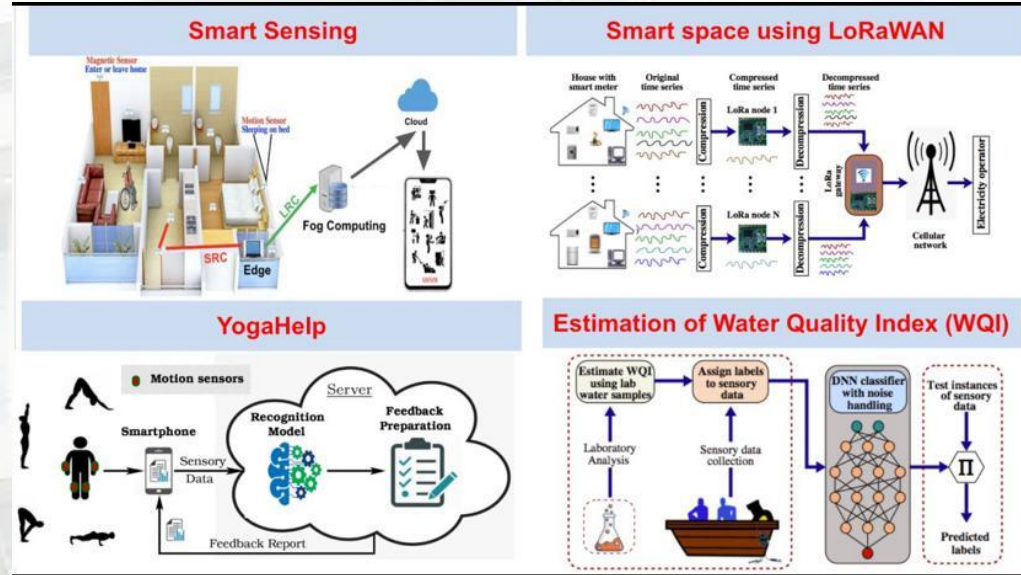4. To inculcate the moral, ethical, and social ideals essential for prosperous nation-building.

Ubiquitous Computing Lab
(GF Lab No. 4)

Lab Coordinator : **Dr. Karan Verma**
Technical Staff : Mr. Pradeep Kumar
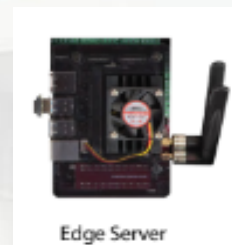
Lab Objectives:

- To skill the undergraduate and postgraduate students in the IoT and Embedded system design utilizing state of the art hardware boards and software as per industry standards.

- Unique and Practical experience in working with connected devices, sensors, actuators, micro controllers and data. Exposure to real world applications ..connecting physical objects to the Internet

- To enhance research activities in different application areas of IoT like smart home, smart village, smart healthcare, smart grid, smart agriculture, industry 4.0 and wearable IoT devices etc.
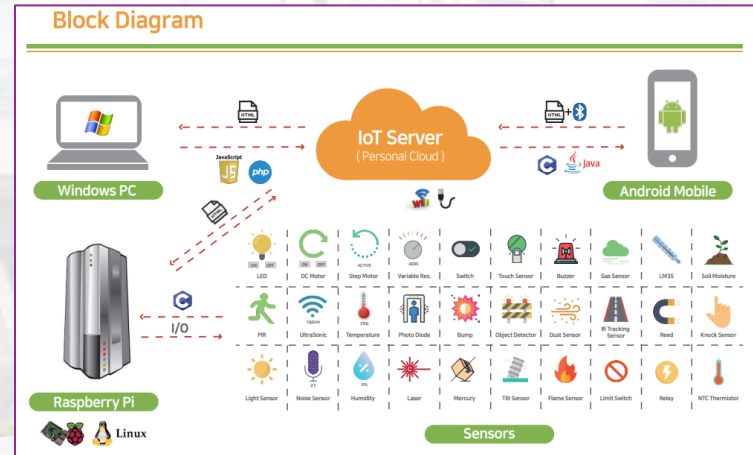
Ubiquitous Computing Lab
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Name of Equipment	Year of Procurement	Details	Present status
HBE-IoT Smart Server HBE-IoT Smart Server	2023	Components and Concepts of Sensor Network, Sensor Network Platform, Sensor Network Protocol, Sensor Network, Development Environment, Basic Sensor Control, Extension Module Control, System spec.: 12th Gen Intel(R) core(TM) i7-12700 ~2.1GHz, 32 GB RAM, 1TB SSD.	Accomplished

Layout

SOUND PHOTO DIODE REED SHOCK LED TEMPERATURE LIGHT IR TRACKING SWITCH BUZZER

MERCURY LASER PIR LIMIT SWITCH ULTRA SONIC RGB LED TILT TEMPERATURE-HUMIDITY FLAME THERMISTOR IOT SMART SERVER SHIELD RASPBERRYPI 3B

SOIL MOISTURE KNOCK IR OBSTACLE TOUCH RELAY GAS DUST VARIABLE RESISTANCE STEP MOTOR DC MOTOR

Edge Server

Ubiquitous Computing Lab
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Name of Equipment	Year of Procurement	Details	Present status
IoT Smart Health	2024	Data Collecting, ECG Signal Generating, Bio-Signal Measuring Part,Bio-Signal Measuring, ECG (Electro Cardio Gram), Respiration, SpO2 (Pulse Oximeter), NIBP (Non-Invasive Blood Pressure), Bio Impeda-nce, EEG (Electro EncephaloGram), EMG (Electro MyoGraphy), EOG (Electro OculoGraphy), GSR (Galvanic Skin Response)	Accomplished

Block Diagram

Ubiquitous Computing Lab
(GF Lab No. 4)

Hardware Details:

- Lab Capacity : 16

- Desktop with i7 12th Gen,

  - 512GB NVMe SSD,

  - 1 TB HDD

  - 32 GB RAM

  - Windows 11 Pro, Windows 10 Pro

  - GPU Nvidia Quadro T1000 4GB

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NATIONAL INSTITUTE OF TECHNOLOGY DELHI

धन्यवाद | THANK YOU

कंप्यूटर विज्ञानं एवं अभियांत्रिकी विभाग

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