



Since 1983

Dr. Vishwanath Karad

**MIT WORLD PEACE
UNIVERSITY | PUNE**

TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

Preface – Concise & Professional School of Computer Science and Engineering

The School of Computer Science and Engineering at MIT-WPU, Pune, established in 1987, offers industry-focused UG/PG programs (B.Tech, M.Tech, Ph.D.) in AI, Data Science, Cyber Security, and Cloud Computing. The School of Computer Science and Engineering at MIT-WPU stands tall in technological prowess and academic distinction. With a forward-looking curriculum and advanced facilities, our School is the crucible for the next wave of computer scientists and engineering luminaries.

Our faculty, comprising not only educators but also industry leaders, impart real-world insights in areas ranging from software development and system design to machine learning and cybersecurity. We are committed to experiential learning, providing you with access to immersive opportunities, internships, and research initiatives.

The Department of Computer Engineering and Technology (SCET) operates from a Eight-storied VYAS Building, which comprises 40 classrooms, 41 Laboratories along with 250 faculty cabins/cubicles.

The Vyas Building comprises three industry-sponsored Centres of Excellence, Laboratories namely - The iOS Development Centre provides specialized training in mobile application development, focusing on iOS technologies, industry standards, and real-world project implementation, DRONEX Lab, dedicated to drone design and innovation projects exposure to modern drone tools and software; & the D.A.R.C Laboratory provides practical training in ethical hacking and advanced cybersecurity tools, with real-world simulations of cyber threats and defense mechanisms.

Research is a key pillar of the Department of Computer Engineering and Technology, driving innovation and industry-relevant technological advancement. This brochure highlights our core research strengths, ongoing projects, and significant academic and industry contributions. With a strong focus on real-world problem solving, innovation, and societal impact, the department is committed to advancing next-generation computing technologies through high-quality research, strategic industry collaborations, and multidisciplinary partnerships.





iOS Development Centre

The **iOS Development Centre** at MITWPU Pune is one-of-its-kind initiative aimed at empowering students with future-ready skills in iOS Application Development, Design Thinking and Innovation.

The program enables access to a world-class learning facility with **Apple** products like **iMacs, MacBook, iPhones, iPads, Apple Watches** and learning from industry trained faculties.

Key Capabilities:

- In-depth training in iOS app development.
- Access to cutting-edge Apple technology and resources.
- Emphasis on design thinking, encouraging students to create innovative, user-centric solutions.
- A four-week industry internship to provide real-world exposure and practical learning.
- Collaboration between technology, business, and design, enabling multi disciplinary growth and fostering entrepreneurial skills.

Projects / Research Outputs

Throughout the year-long program, students work on a variety of projects aimed at solving **technical, societal, and real-world problems**. These projects involve the application of iOS development skills to create functional and innovative apps addressing diverse challenges across different sectors.

The Community Centre is a vibrant hub for creativity and collaboration, with dedicated huddle rooms, fully equipped conference rooms, and open brainstorming areas.

The curriculum emphasizes **Design Thinking, iOS frameworks, & Swift Programming** helping students develop problem-solving, critical thinking, and storytelling skills while building end-to-end product skills.

Access to Next-Generation Devices: The Centre is equipped with **iMacs** offering one-to-one iMac access for every student along with **iPhones, iPads, and Apple Watches** for testing and development.



DRONEX Innovation Lab



Specifications:

AIRHDX01 Drone

Compact UAV for Delivery & Precision Dropping

- Weight: 2 kg (± 0.5 kg)
- Dimensions: H-450mm L-500mm W-550mm
- Frame Material: Glass Fiber and ABS
- Type: Hexa UAV
- Payload Capacity: 1.5 kg (± 0.5 kg)
- Start Mechanism: Remote & Manual Start/Stop

Mission Type:

- Aerial Delivery – Transport essential supplies, medicines, and equipment up to 2 kg.
- Precision Dropping – Automated release system for accurate payload delivery.
- Disaster Response – Deliver relief kits, food, and emergency supplies to hard-to-reach areas.
- Commercial Logistics – Short-range deliveries for e-commerce and last-mile transport.



AIRDIY01 Drone

DIY Kit Drone for Hands-On Learning



Specifications:

AIRCSV01 Drone

Close Frame Survey UAV for Precision Mapping

- Weight: 2 kg (± 0.5 kg)
- Dimensions: H-400mm L-560mm W-560mm
- Frame Material: Carbon Fiber
- Type: Quad UAV
- Payload Capacity: 0.5 kg
- Start Mechanism: Remote & Manual Start/Stop

Mission Type:

- Aerial Survey & Mapping – High-accuracy photogrammetry for land and site planning.
- RGB Payload Imaging – Detailed high-resolution visuals for terrain and asset monitoring.
- Infrastructure Inspection – Capture precise aerial data for utilities, construction, and roads.

Specifications:

- Weight: 2 kg (± 0.5 kg)
- Dimensions: H-100mm L-450mm W-455 mm
- Frame Material: Glass Fiber And ABS
- Type: Quad UAV
- Payload Capacity: 1 kg (± 0.5 kg)
- Start Mechanism: Remote & Manual Start/Stop

Mission Type:

- Drone Design Basics – Understand aerodynamics, structure, and frame design.
- Component Familiarity – Motors, propellers, ESCs, flight controllers, battery systems, and transmitters.
- Hands-On Assembly – Build, wire, and calibrate a functioning drone from parts.
- Flight Training – Learn basic flight maneuvers, stability control, and safety



AIRSR01 Drone
Compact Surveillance UAV with AI Tracking

- Specifications:**
- Weight: 2 kg (± 0.5 kg)
 - Dimensions: H-280 mm L-650 mm W-900 mm
 - Frame Material: Carbon Fiber
 - Type: Quad UAV
 - Payload Capacity: 1.5 kg (± 0.5 kg)
 - Start Mechanism: Remote & Manual Start/Stop

- Mission Type:**
- RGB Camera – High-resolution real-time visual monitoring
 - Thermal Camera – Heat-signature detection for day/night operations
 - AI Tracking System – Automated target recognition and object tracking for enhanced situational intelligence



AIRCSV01 Drone
Close Frame Survey UAV for Precision Mapping

- Specifications:**
- Weight: 2 kg (± 0.5 kg)
 - Dimensions: H-400mm L-560mm W-560mm
 - Frame Material: Carbon Fiber
 - Type: Quad UAV
 - Payload Capacity: 0.5 kg
 - Start Mechanism: Remote & Manual Start/Stop

- Mission Type:**
- Aerial Survey & Mapping – High-accuracy photogrammetry for land and site planning.
 - RGB Payload Imaging – Detailed high-resolution visuals for terrain and asset monitoring.
 - Infrastructure Inspection – Capture precise aerial data for utilities, construction, and roads.



AIRAG06 Drone
Smart Agriculture UAV with Precision Spraying

- Specifications:**
- Weight: 6 kg (± 0.5 kg)
 - Dimensions mm: H-605, L-640, W-475 (Folded)
 - Frame Material: Carbon Fiber/ABS
 - Type: Quad UAV
 - Payload Capacity: 06 L Tank
 - Start Mechanism: Remote & Manual Start/Stop

- Mission Type:**
- Precision Spraying – Automated 6L liquid tank for pesticides, fertilizers, and nutrients with uniform coverage.
 - Crop Monitoring (RGB Camera) – High-resolution imaging for plant health and field inspection. * (with Additional Mounted Payloads.)
 - AI-Based Path Planning – Intelligent route optimization for accurate and efficient spraying.



D.A.R.C. LAB (Deep Cycles Advanced Research Cyber Laboratory)

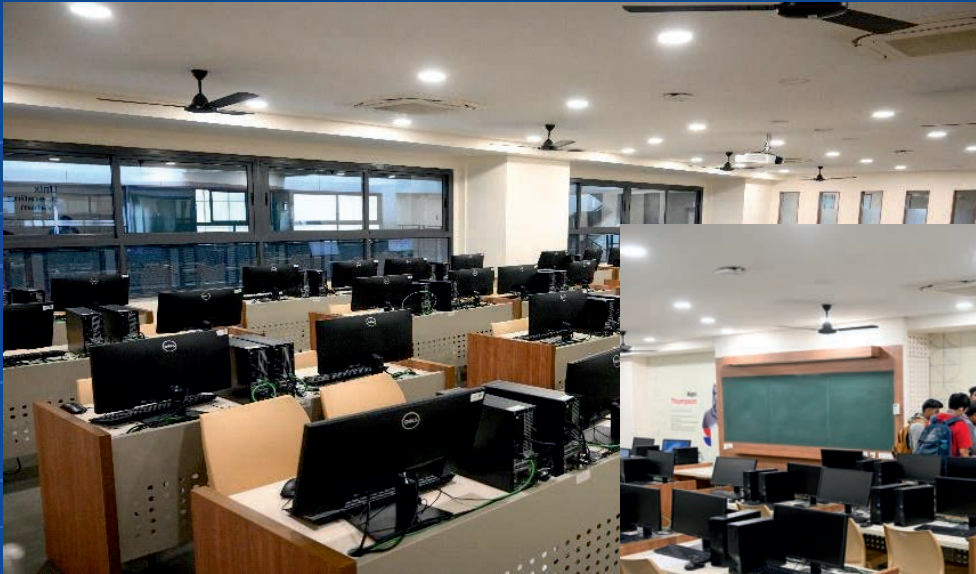
About DARC Lab:

D.A.R.C. Laboratory, the lab is equipped with feature military-grade cybersecurity tools, industry-driven training, elite university partnerships, and exclusive access to global law enforcement networks. Equipped for **Red Teaming, Digital Forensics, OSINT, Dark Web Investigations, and AI-powered Threat Intelligence**, DARC will position WPU as a leader in cybersecurity education and research.

Following Tools are available at beginning and rest will be made available as per need of the project.

Cyber Cell Lab Industry Grade Software (Open Source)

Category	Tools
Network Security	Nmap, Netcat, WhatWeb, Amass, Sublist3r, Recon-ng
Exploitation & Post-Exploitation	Metasploit, Impacket, Mimikatz, PsExec, LinPEAS
Phishing & Social Engineering	GoPhish, SET, Evilginx2
Password Cracking	John the Ripper, Hashcat, Hydra, CrackMapExec
Web Security	Burp Suite, OWASP ZAP, Nikto, Wfuzz
Forensics	Volatility, Sleuth Kit, Sherloq, Exiftool, Wireshark, TSHARK
Reverse Engineering	Ghidra, Radare2, dex2jar
MITM & Network Analysis	Bettercap, Responder, Proxychains, Ettercap



Industrial IOT Laboratory

Equipments



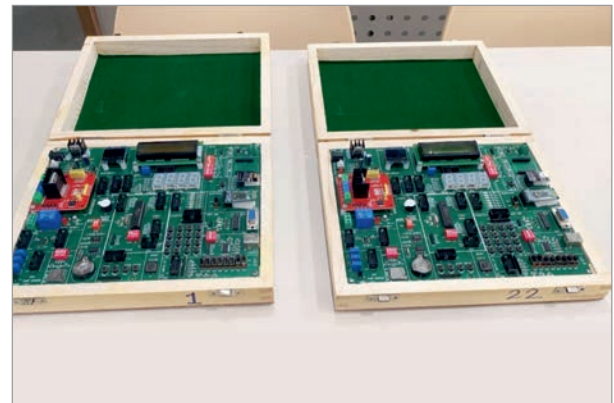
Equipment : IOTIF IoT Trainer Kit (Black Case Kit)

Make/Model : IOTIF Trainer Kit

Specifications : Includes Raspberry Pi interface, Arduino Nano, LCD, keypad, sensors, motor drivers, breadboard area; supports actuators, wireless modules, and cloud-based IoT experiments

Laboratory : Industrial IoT Lab

Location : VY228



Equipment : ATmega328 IoT Trainer Kit (Wooden Box Kit)

Make/Model : ATmega328 Trainer Kit

Specifications : Includes LCD display, 7-segment display, relays, keypad, sensors, and communication modules for microcontroller and IoT experiments

Laboratory : Industrial IoT Lab

Location : VY228



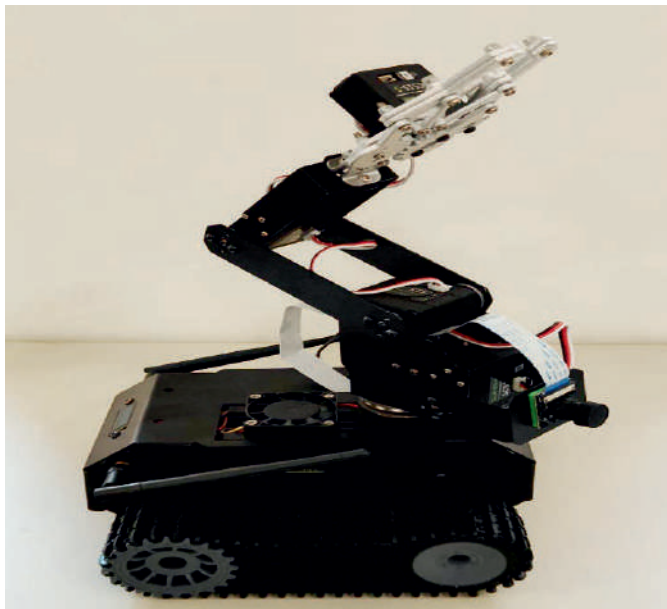
Unitree Quadruped Go2 Edu u1 Robot

The **Unitree Go2 Edu U1** is an advanced, AI-powered quadruped robot dog designed for education, research, and specific enterprise tasks, offering agile four-legged movement, advanced sensors (like 4D LiDAR), obstacle avoidance, and programmable capabilities via ROS/SDK for complex autonomous navigation, inspection, and interaction, making it a versatile platform for learning about embodied AI.

Key Features & Capabilities:

Advanced Mobility	: Agile four-legged design with dynamic movements like jumping, climbing, and moonwalking, stable on various terrains.
AI & Sensors	: Equipped with AI vision, depth cameras, and LiDAR for precise mapping and navigation, even in complex environments.
Programming & Control	: Supports Python, C++, ROS/ROS2, mobile apps, and remote controllers for deep customization and development.
Interactive Features	: Includes built-in microphone, speaker, and lights for voice interaction and status feedback.
Educational Focus	: Tailored for STEM education, allowing students and researchers hands-on experience with robotics, AI, and autonomous systems.

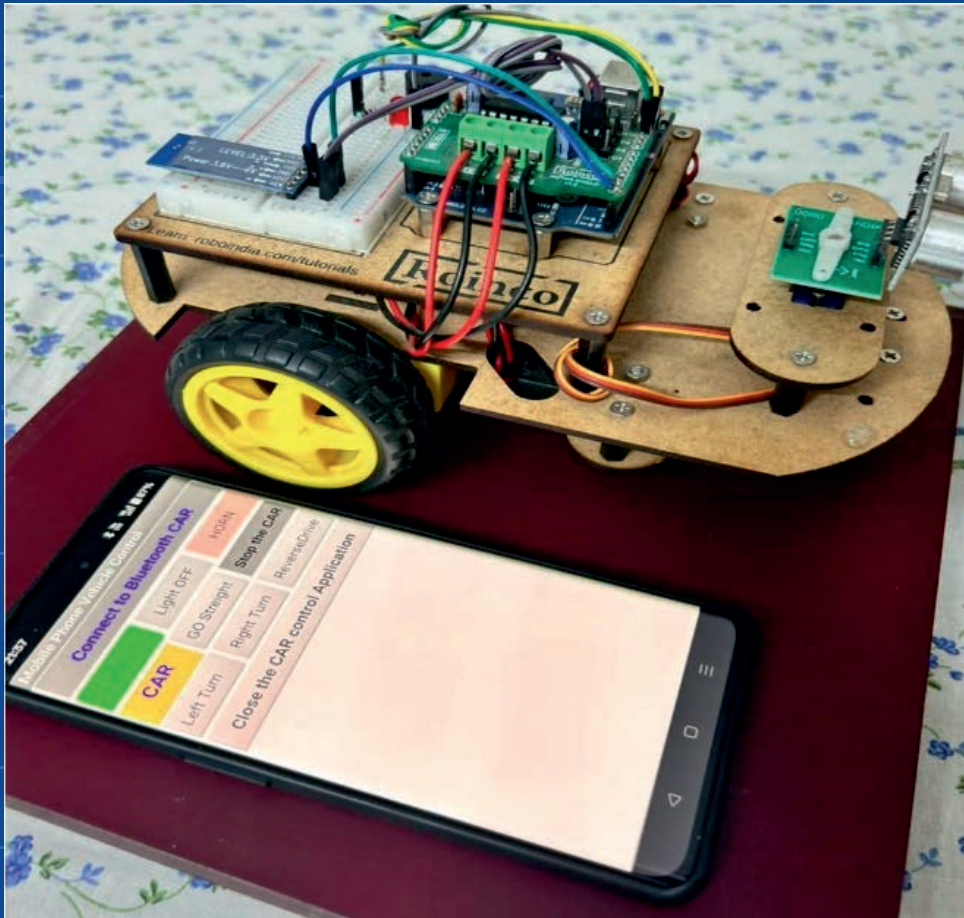
IOT robot with Jeson Nano



CPU	: Quad-core ARM Cortex-A57 (~1.43 GHz)
GPU	: 128 - core NVIDIA Maxwell architecture (~472 GFLOPS FP16) – great for AI inference at the edge
Memory	: 4 GB LPDDR4 (25.6 GB/s)
Storage	: microSD slot (user-provided)
Networking	: Gigabit Ethernet onboard, Wi-Fi via M.2 Key E module (optional)
USB	: 1× USB 3.0 + several USB 2.0 ports
Camera Interfaces	: 2 × MIPI CSI-2 connectors (AI vision sensors)
I/O	: 40-pin GPIO header with UART, SPI, I2C, PWM, GPIO for sensors & actuators
Video	: HDMI/DisplayPort for debugging or display
Power	: ~5 W to 10 W depending on use case (low-power edge AI)

Software & Middleware

JetPack SDK	: Linux + CUDA + AI libraries
ROS (Robot Operating System)	: Robotics middleware for multi-node communication
AI Models	: Object detection, tracking, SLAM navigation
IoT Protocols	: MQTT/CoAP for cloud connectivity



Mobile Phone Based Car Control Using Arduino and Bluetooth Communication

Internet of Things (IoT) has revolutionized automation and smart control systems. This project, *Mobile Phone Based Car Control*, focuses on designing and developing a smart robotic car that can be controlled wirelessly using a mobile phone application. The system integrates an Arduino Uno microcontroller, Bluetooth module (HC-05), and a mobile application built using MIT App Inventor.

The mobile application enables users to control the car's motion – including forward, backward, left, right, stop, as well as additional functionalities such as lights ON/OFF and horn control. The communication between the mobile phone and car is established through Bluetooth, allowing short-range wireless control.

This project in the **IOT lab**, demonstrates the integration of embedded systems, wireless communication, and mobile app development under the IoT framework, showcasing how traditional control systems can be enhanced with smart technologies.

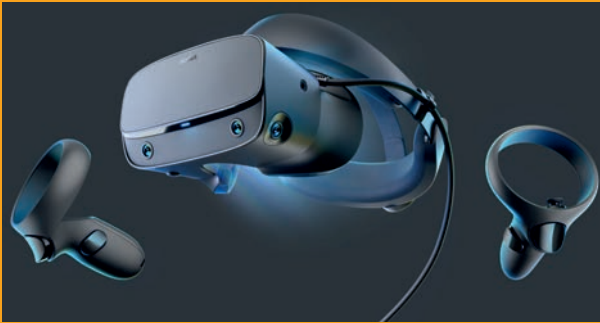


ARVR devices Available in ARVR Lab as follows:

The ARVR Lab aims to develop an Immersive Technology Application capable of creating augmented and virtual reality solutions for next generations.

ARVR laboratory is equipped with immersive technology devices to support cutting-edge experimentation, prototyping, and development.

The following resources are available:



Virtual Reality (VR) Headsets:
Oculus Rift



Oculus Quest 2: Quest 2 gives you a solid, affordable all-in-one VR experience: good resolution, good comfort, and reasonable battery life.

Resolution: 1832 × 1920 per eye

Chipset: Snapdragon XR2 Gen 1

RAM: 6 GB, Storage: 128 / 256 GB

Lenses: Fresnel, Battery: 2–3 hours



Oculus Quest 3: Quest 3 is sharper, more powerful, has better lenses, and supports real mixed reality.

Resolution: 2064 × 2208 per eye Chipset: Snapdragon XR2 Gen 2 (much faster), RAM: 8 GB Storage: 128 / 512 GB

Lenses: Pancake lenses (sharper + slimmer)

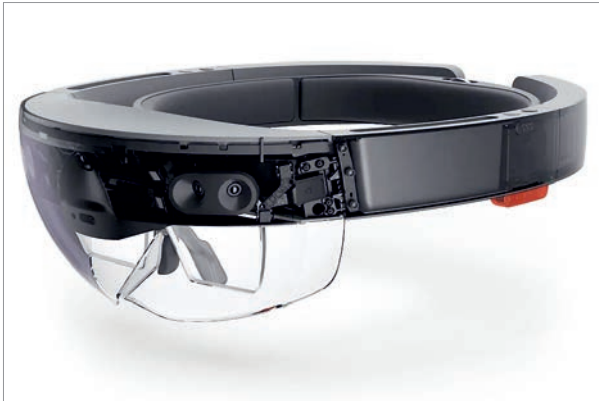
Passthrough: Full-color mixed reality

Battery: ≈ 2 hours



Microsoft HoloLens (Mixed Reality): HoloLens 2 blends your real world with digital holograms – transparent display, real-time head/eye/hand tracking, and full mixed-reality features.

Qualcomm Snapdragon 850 + a custom Holographic Processing Unit, with 4 GB RAM and 64 GB storage, Sensors: accelerometer, gyroscope, magnetometer, 6-DoF



Hololens

Display & Optics

Type	: See-through holographic lenses (AR)
Resolution	: ~1268 × 720 per eye
Holographic density	: ~2.3 million light points
Field of view	: ~34° diagonal
Interpupillary distance	: Automatic calibration

Software:

OS	: Windows 10 Holographic
Apps	: Universal Windows Platform (UWP)



Haptic Feedback Modules

Total Haptic Points:

Vest	: 40 individually addressable vibro-tactile motors
Arms	: 10 motors (5 per arm)
Feet	: 4 motors (2 per foot)
Face	: 1 motor (optional face strap)
Hands	: 4 motors (2 per hand — optional attachment)

Software & Control

bHaptics Player app	: Customize feedback intensity & presets
SDK	: Developers can create custom haptic patterns in Unity/Unreal
Profiles	: Pre-built haptic profiles for popular games

The bHaptics TactSuit Pro is a wireless, wearable haptic feedback system that adds realistic touch sensations across your body to enhance VR games, simulations, and interactive apps. It's compatible with PC VR (SteamVR) and some standalone headsets with appropriate support.



quest3S

Powerful Performance

- Snapdragon XR2 Gen 2 processor (same chip as Quest 3)
- Smooth performance for modern VR games & apps
- 8 GB RAM for fast multitasking
-

In short

Quest 3S = Quest 3 power + lower price, designed for:

- VR gaming
- Mixed-reality experiences
- Fitness, learning, and social apps



TactGloves_DK2

Haptic Feedback

Haptic points : 6 feedback points per glove (12 total — 6 on each) using LRA vibration motors for tactile sensations on fingertips and wrist.

Battery & Power

Battery type : Li-ion rechargeable (3.8 V, 630 mAh, ~2.394 Wh)

Playtime : Up to ~3.5 hours of use on a full charge.

Charging time : ~2 hours with 5 V 0.5 A charger (USB-C)

TactGlove DK2 are lightweight, Bluetooth-connected haptic gloves that add realistic fingertip sensations to VR/AR hand interactions through multiple vibration motors, with several hours of battery life and broad headset compatibility



High-Performance Computing Systems Gaming-grade workstations and high-end gaming laptop.

- **Specifications:** This system is optimized for AI/ML model training, deep learning research, big data analytics, and computational simulations. Users are expected to follow best practices to maximize system efficiency and maintain security.

1. Hardware Configuration

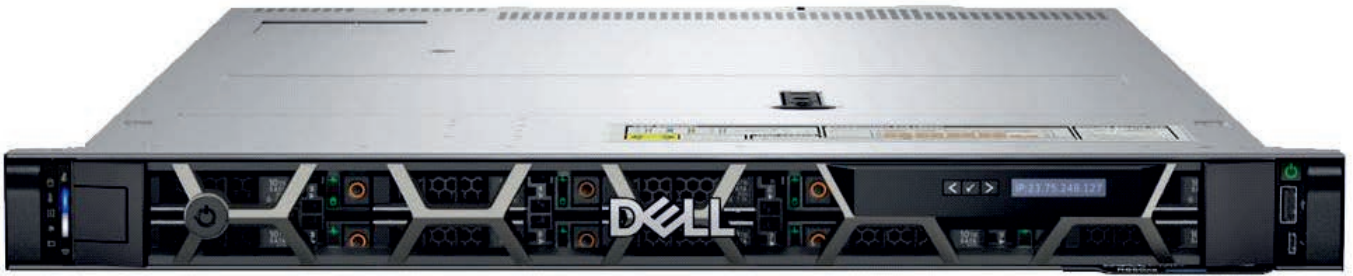
- **Model:** PARAM Shavak DL
- **Processor:** Dual Socket Intel Xeon® Gold 6226R (16 Cores, 2.9 GHz base clock speed)
- **GPU:** 2 x NVIDIA RTX5000 Accelerator Cards
- **Memory (RAM):** 96 GB DDR4
- **Storage:** 16 TB SATA/NL-SAS disks with RAID 0, 1, and 5 HDD configuration
- **Monitor:** 23" TFT LCD Display

2. Software Environment

- **Operating System:** Ubuntu 20.04 LTS
- **GPU Drivers & CUDA Toolkit:** Pre-installed and configured for optimal deep learning performance
- **Supported Frameworks:** TensorFlow, PyTorch, Keras, Caffe, MXNet, OpenCV, and other AI/ML libraries
- **Programming Languages:** Python, C++, R, and other relevant languages for HPC and AI applications
- **Compilers & Libraries:** GCC, OpenMPI, LAPACK, BLAS, cuDNN, and other necessary packages for high-performance computing

3. Networking & Security

- **Network Connectivity:** Configured for secure access within the university network
- **User Authentication:** Role-based access control (RBAC) with secure login credentials
- **Data Protection:** Enforced backup policies and controlled user permissions for resource allocation
- **Hosting & Jupyter-Hub Access:** To facilitate seamless computational workflows, the **PARAM Shavak DL** system at **Dr. Vishwanath Karad MIT World Peace University, Department of Computer Engineering and Technology, under the School of Computer Science and Engineering**, is configured with **Jupyter-Hub** for multi-user interactive computing.



Dell PowerEdge R650xs Server

Server Name: - Moodle Server

- **Make of Server:** - Dell PowerEdge R650xs
- **Server Configuration:** - Dell PowerEdge R650xs.
- **Memory Capacity:** 32GB RDIMM, 3200MT/s, Dual Rank 16Gb BASE x8 4 (Qty. 4) Hard Drives 480GB SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive, 1 DWPD (Qty. 2); Hard Drives for 2nd RAID Container 2.4TB 10K RPM SAS ISE 12Gbps 512e 2.5in Hot-plug Hard Drive (Qty. 2); OS Media Kits Windows Server 2022 Standard, No Media, WS2016 Std Downgrade w/DVD; Dell 22 Monitor - P2222H
- **Uses of Moodle Server:** - Moodle is a platform for online learning that enables you to create online courses, add assignments and online exams, and keep an eye on your students' progress. It also allows you to communicate with the students and encourages communication between them in forums and discussions.



Server Name: - Local Cloud (Use for Faculty)

- **Make of Server:** HP
- **Server Configuration:** i5 Processor, 500 GB HDD, 16GB RAM
- **Uses of Local Cloud:** This Local cloud is used for Data storage on Intranet. This data is accessed in campus with the help of intranet. Local Cloud is used for File storage, Data backups and archiving.

Server Name: - Qualnet Server

- **Make of Server:** HP
- **Server Configuration:** i7 Processor, 500 GB HDD, 16GB RAM
- **Uses of Qualnet Server:** The QualNet network simulation platform (QualNet) is used by planners, analysts, IT technicians, and communication specialists to evaluate the performance of communication networks under different operational conditions and to identify and mitigate identified operational issues.



- **Emotiv EPOC X EEG Device:** Emotiv EPOC-X is a 14-channel EEG (Electroencephalography) headset designed for brain-computer interface (BCI) applications. It uses dry electrodes to capture real-time brainwave data, offering insights into cognitive states, mental performance, and emotional responses. The device is commonly used for research, neurofeedback, and it connects wirelessly to devices for easy data collection and analysis.



NAO Humanoid Robot

Physical Properties

Height	: ~58 cm (0.58 m) – about the size of a toddler.
Width	: ~27.5 cm; Depth: ~31.1 cm.
Weight	: ~5.3–5.6 kg (varies slightly by revision).

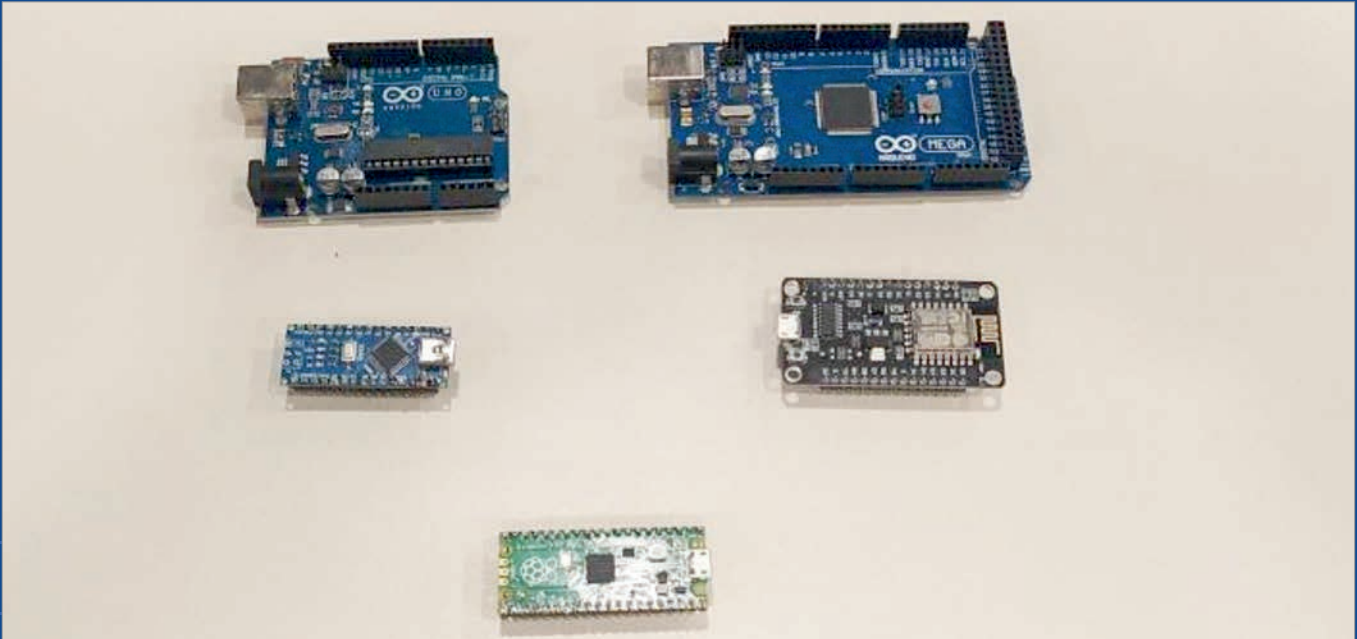
Compute & Software

Processor	: Intel Atom E3845 quad-core @ ~1.91GHz
RAM	: 4 GB DDR3
Storage	: 32 GB eMMC/SSD
Operating System	: Linux (NAOqi)
Programming	: Python, C++, Java, Choregraphe, Blockly, and others (via SDK/API)

Functional Features of Chintu – Humanoid Robot

Sound Source Localization	: Detects surrounding sound and orients its head toward the sound source.
Assistive Reading Capability	: Reads newspapers aloud to support elderly individuals and users requiring assistance.
Programmable Motion Response	: Can be programmed to perform synchronized dance movements based on music input.
Interactive Communication Interface	: Enables interactive human-robot communication through customized programming.

IoT Boards (Available in IoT Lab)



Arduino UNO

Equipment : Arduino UNO
Make/Model : ATmega328P
Specifications : 14 digital I/O, 6 analog; basic IoT / embedded use
Laboratory : Industrial IoT Lab
Location : VY228

NodeMCU ESP8266

Equipment : NodeMCU ESP8266
Make/Model : ESP8266
Specifications : Wi-Fi IoT board; supports Lua/Arduino IDE
Laboratory : Industrial IoT Lab
Location : VY228

Arduino MEGA 2560

Equipment : Arduino Mega 2560
Make/Model : ATmega2560
Specifications : 54 digital, 16 analog; for complex IoT/robotics
Laboratory : Industrial IoT Lab
Location : VY228

Raspberry Pi Pico

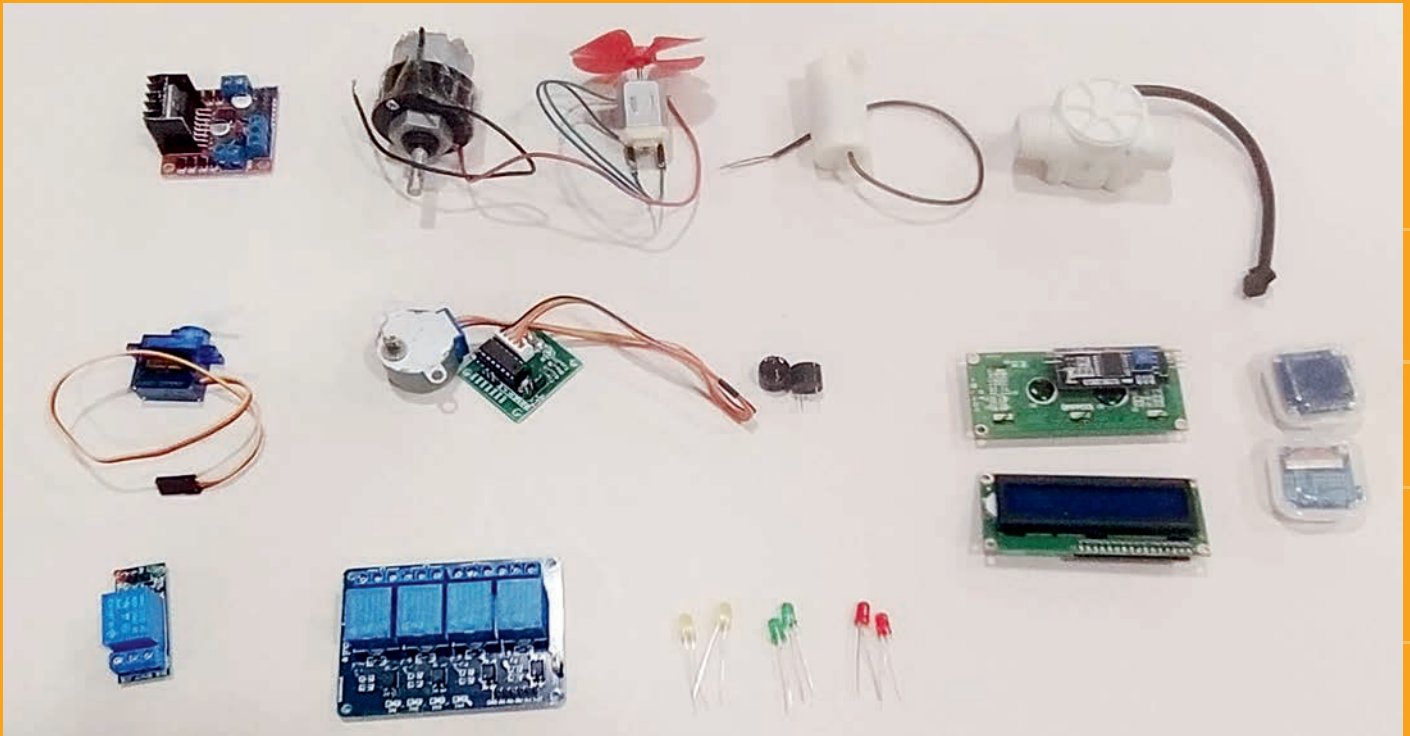
Equipment : Raspberry Pi Pico
Make/Model : RP2040
Specifications : Dual-core MCU; MicroPython/C
Laboratory : Industrial IoT Lab
Location : VY228

Arduino NANO

Equipment : Arduino Nano
Make/Model : ATmega328P
Specifications : Compact, low-power, breadboard-friendly
Laboratory : Industrial IoT Lab
Location : VY228

Raspberry Pi 4 Model B (1GB & 4GB)

Equipment : Raspberry Pi 4 Model B
Make/Model : Pi 4 (1GB / 4GB)
Specifications : Quad-core SBC; supports Linux, IoT servers, AI, edge computing; high-performance applications
Laboratory : Industrial IoT Lab
Location : VY228



IoT Actuators Available in IoT Lab

DC Motor with L298N Driver

A DC motor provides continuous rotational motion for mechanical tasks. The L298N driver controls motor speed and direction using external signals. Commonly used in robots and automation.

Stepper Motor (5V) with Driver

A stepper motor rotates in precise steps, making it ideal for position control. The driver controls each step accurately. Used in CNC machines, 3D printers, and precise IoT mechanisms.

Servo Motor

A servo motor offers precise angular movement (0–180°). Controlled using PWM signals and used in robotic arms, sensors positioning, and small automation systems.

Water Pump

A small DC pump is used to move or lift water in IoT projects. Controlled via relay or motor driver. Used in smart irrigation and automation systems.

Water Flow Sensor

Measures the rate of water flow using a rotating turbine and Hall-effect sensor. Sends pulses proportional to flow rate. Used in water monitoring and automatic control systems.

Buzzer

A simple sound-producing actuator. Generates beeps or alerts when triggered. Used for warnings, notifications, and alarms in IoT devices.

OLED Display (I2C)

A small, low-power display module that shows text or graphics. Uses I2C communication for easy interfacing. Ideal for compact IoT devices.

LCD Display (with I2C Circuit)

A 16x2 or 20x4 display that shows characters. The I2C adapter reduces wiring from 16 pins to 4 pins. Used for readings, menus, and system outputs.

1-Channel Relay

An electromechanical switch is used to control one high-voltage device. Allows Arduino/ESP boards to operate AC appliances safely.

4-Channel Relay

A relay module that controls four independent AC or DC loads. It is useful for automation projects controlling multiple appliances.



IoT Sensors available in IoT Lab

Flex Sensor

Equipment	: Flex Sensor
Make/Model	: Bend Sensor
Specifications	: Resistance changes with bending; used in gesture/motion detection
Laboratory	: Industrial IoT Lab
Location	: VY228

MQ-2 Gas Sensor

Equipment : MQ-2 Gas Sensor
Make/Model : MQ-2
Specifications : Detects LPG, smoke, combustible gases
Laboratory : Industrial IoT Lab
Location : VY228

MQ-5 Gas Sensor

Equipment : MQ-5 Gas Sensor
Make/Model : MQ-5
Specifications : Detects LPG & natural gas
Laboratory : Industrial IoT Lab
Location : VY228

MQ-6 Gas Sensor

Equipment : MQ-6 Gas Sensor
Make/Model : MQ-6
Specifications : Detects LPG & Butane
Laboratory : Industrial IoT Lab
Location : VY228

HC-05 Bluetooth Module

Equipment : HC-05 Bluetooth
Make/Model : HC-05
Specifications : Wireless serial communication
Laboratory : Industrial IoT Lab
Location : VY228

Soil Moisture Sensor

Equipment	: Soil Moisture Sensor
Make/Model	: Soil Sensor
Specifications	: Measures soil water content
Laboratory	: Industrial IoT Lab
Location	: VY228

LDR

Equipment	: LDR
Make/Model	: Light Sensor
Specifications	: Detects light intensity
Laboratory	: Industrial IoT Lab
Location	: VY228

IR Sensor

Equipment	: IR Sensor
Make/Model	: IR Module
Specifications	: Detects objects using IR
Laboratory	: Industrial IoT Lab
Location	: VY228

LM35 Temperature Sensor

Equipment : LM35
Make/Model : LM35
Specifications : Analog temperature output
Laboratory : Industrial IoT Lab
Location : VY228

E18-D80NK Proximity Sensor

Equipment : E18-D80NK
Proximity

Make/Mode I: E18-D80NK

Specifications : IR proximity
detection (3–80 cm)

Laboratory : Industrial IoT Lab

Location : VY228

RFID Module (RC522)

Equipment : RFID Module
Make/Model : RC522
Specifications : Reads RFID tags
Laboratory : Industrial IoT Lab
Location : VY228

Laboratory List

No	Room No	Machine Make	Lab Name
1	VY 027	Apple MAC	Gen AI Laboratory
2	VY 028	Apple MAC	OOPL Laboratory
3	VY 029	Apple MAC	DSF Laboratory
4	VY 030	Apple MAC	Metaverse Laboratory
First Floor			
5	VY 112	Dell i7	Digital electronics
6	VY 113	Dell i7	Microprocessor laboratory
7	VY 123	Dell i7	Embedded systems Lab
8	VY 126	Apple MAC	SDL Laboratory
9	VY 127	Apple MAC	Cloud computing
10	VY 128	Apple MAC	Big data Lab
11	VY 129	Apple MAC	System software
Second Floor			
12	VY 206	Dell i7	AI/ ML Lab
13	VY 212	Dell i7	ARVR Laboratory
14	VY 222	Dell i7	Robotics automation
15	VY 225	Dell i5	Web Technology
16	VY 226	Dell i5	HCI Laboratory
17	VY 227	Dell i5	Blockchain Technology
18	VY 228	Dell i5	Industrial IoT
Third Floor			
19	VY 314	Dell i5	Database Lab
20	VY 324	Dell i5	Deep Learning
21	VY 327	Dell i5	Wireless network lab
22	VY 328	Dell i5	Digital forensics Lab
23	VY 329	Dell i5	Image processing
24	VY 330	Dell i5	Operating system Lab

Courses Offered to Industry / Working Professionals

Domain	Course / Training Area	Target Audience
Computer Science & Engineering	Advanced Programming, Data Structures, System Design	Software Developers, IT Engineers
Artificial Intelligence & Data Science (AI & DS)	Machine Learning, Deep Learning, Data Analytics, Generative AI	Data Analysts, AI Engineers, IT Professionals
Cyber Security	Ethical Hacking, Network Security, Digital Forensics, SOC Operations	Security Analysts, Network Engineers, IT Security Teams
Blockchain Technology	Blockchain Fundamentals, Smart Contract Development, Web3 Applications	Developers, FinTech Professionals, Startup Teams
Cloud Computing	AWS / Azure / GCP Fundamentals, Cloud Architecture, DevOps on Cloud	Cloud Engineers, System Administrators, DevOps Engineers
Emerging Technologies	IoT, Edge Computing, Quantum Computing Basics	R&D Professionals, Technology Enthusiasts
Software Development Tools	Full Stack Development, Mobile App Development, API Development	Software Engineers, Application Developers



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