



G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (For Women)

(AUTONOMOUS)

**Accredited by NBA & NAAC, An ISO 9001:2015 Certified Institution
Shaikpet, Hyderabad- 500 104**

**Department of Electronics & Communications Engineering
Centre of Excellence
for
Internet of Things (IoT)**

About the Facility:

The Department of ECE, GNITS has established **Centre of Excellence in Internet of Things (CoEIoT) in collaboration with Texas University Program in the year 2017.** This center of Excellence stands as a pivotal hub within our academic institution, that focuses on driving innovation, expertise, and best practices in the field of IoT. The main purpose of establishing an IoT Center of Excellence is to accelerate the development, deployment, and adoption of IoT technologies and solutions. The establishment of this center aims to enhance students' skills, fostering innovation in technology and the creation of commercially valuable smart systems. The IoT Center of Excellence serves as a collaborative platform for students and faculty to engage closely with the industry, maximizing the efficient utilization of resources. The laboratory is equipped with IoT kits valued at Rs.2.47 Lakhs, facilitating the development of various projects in IoT and Embedded systems.

Year of Establishment: 2017

Name of the Coordinator: Chindam Hari Prasad

Designation: Assistant Professor

Email: harichindam@gnits.ac.in



Objectives :

- Enabling the innovation, research, and deployment of IoT technologies to generate business value.
- Offering training and skill development initiatives for both employees and students to augment their understanding and proficiency in IoT technologies.
- Promoting cross-functional collaboration among teams, departments, and external partners to harness collective expertise in the development, deployment, and maintenance of IoT solutions.

Faculty associated with Center of Excellence for IoT

S.No.	Name	Designation	Qualification	Specialization
1	Mr. B. Sreekanth Reddy	Asst. Prof.	M.S.	Electrical Engineering
2	T. Srilatha	Asst. Prof.	M.E.	Electronics and Instrumentation
3	M.Shanthi	Asst. Prof.	M.Tech	Embedded Systems
4	Dr. B. Pavani	Asst. Prof.	Ph. D	Internet of Things



Major Equipment & Infrastructure

S.No.	Name of the Equipment	Significance/ Utility features	No. of Items	Cost in (Rs.)
CoE in IoT				
1	IoT KITS: <ul style="list-style-type: none"> ➤ MSP430G2553 Development Kit, ➤ MSP430FR6989 Development Kit, ➤ CC110L Booster Pack, Educational BoosterPack MKII, ➤ C2000 Delfino ➤ MCUs F28377S Launch Pad Development Kit, ➤ Motor Drive BoosterPack featuring DRV8301 and NexFET MOSFETs, ➤ C2000 LED BoosterPack, ➤ Sensor Hub BoosterPack, ➤ SimpleLink MSP432P401R Development Kit, SimpleLink Wi-Fi ➤ CC3100 Booster pack, ➤ Grove starter Kit for launch pad, ➤ Simple Link Wi-Fi CC3200 Launchpad, ➤ CC2650 Sensor Tag, ➤ TM4C129E Crypto Connected IoT Gateway Launch Pad, ➤ Fuel Tank MKII Battery Booster Pack Plug-In Module, ➤ Thermocouple Booster pack ADS1118 	This CoE In IoT houses a range of Texas Instruments' LaunchPad kits featuring analog and digital sensors, along with ARM Cortex M0 to ARM Cortex M4 processor cores. These comprehensive kits facilitate the development of a wide spectrum of applications, spanning from straightforward educational projects to sophisticated industrial solutions. They offer versatility in accommodating different analog and digital sensors, enabling the creation of diverse projects suited for educational purposes as well as high-end industrial applications.	36	2,47,800.00



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MOU's(CoE)

- As part of “QNX Everywhere in India” with Pi Square Technologies, Hyderabad
- IIT Tirupathi Navavishkar I-Hub Foundation for Technology Development at GNITS.
- M/s Smart Bridge Educational Services Private Limited.
- Syncor Solutions Private Limited, Hyderabad, Telangana, India.
- Texas Instruments Innovation Center (Under TI India University Program) with Edgate Private Technologies Limited, Bangalore.

List of Funds Granted

S.No	Name of the Funding Agency	Name of the Principal/ Principal Investigator	Co-Title of the Project	Month and Year	Cost of Projects (in Rupees)	Duration	Sanctioned Id
1	SEED GRANT- GNITS	P.Sripadma Asst. Prof./B.Tulasi Sowjanya, Asst. Professor /B. Sreekanth Reddy Asst. Professor	Smart Kitchen	1/12/2023	Rs 36,000/-	18 months	GNITS/R&D/ SEED/2023/08
2.	IIT Tirupati Navavishkar I-Hub Foundation (UTTNIe)	Dr. B. Pavani, Asst Professor GNITS, Hyd Dr. VSS Kiran CEO Garudalytics Private Limited Hyd	Automatic and Real Time Public Transportation and Monitoring System	10/10/2024	16,37,400	12 Months	
Total Amount in Rs.					1,673,400/-		

Workshops and Training programs conducted in the Centre:

S.No	Event Name	Date	No. of Participants
1	Value added course on "AI Powered Embedded Systems and IoT	25.02.2023 to 13.05.2023	198
2	Technical talk on IoT and Robotics	21.03.2022	173
3	Training on CSoC and Embedded Systems	23.05.2022 to 04.06.2022	9
4	Short Term Training Program (STTP) on Python and Data Sciences for III BTech ECE Students	16.08.2019 to 16.12.2019	11



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5	Embedded System Design Using ARM Cortex M4 MCU's	11.12.2018 14.12.2018	to	20
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List of Projects Carried out Under CoEIoT

List of Projects (2023-2024) 2020 Batch

S.No	Roll No.	Name of the Student	Title of the Project	Name of the Supervisor	Type of Project
1 A7	20251A0452	RAPELLI KEERTHI	An IoT based Intelligent system for Real Time Parking Monitoring system	Ms B.Tulasi Sowjanya	IoT
	20251A0422	MADDIVENI SAHITHI			
	20251A0416	KOLAPUDI AMRUTHA SHINY			
	20251A0414	KANDADI VAISHNAVI			
2 B9	21255A0407	GARRE SADHA	IoT based Smart Power Quality monitoring and Electricity theft detection system	Mrs.A.Sarada	IoT
	20251A0491	ABBINENI PRANATHI			
	20251A04A9	NUVVULA SOWJANYA			
	20251A0474	MYAKALA LAVANYA			
3 B16	21255A0408	Nerella Prathyusha	IoT-Based Smart Agriculture System	Mr.Ch.Hari Prasad	IoT
	20251A0461	Adapa Parvathi			
	21255A0409	Kumblm Gangothri			
	20251A04B8	Sonnathi Akshitha			
4 C8	20251A04E8	TANTINI JHANSI	IoT-Based Water Quality Monitoring System	Mrs.P.SriPadma	IoT
	20251A04F1	A V N S B K SOUMYA PRIYA			
	20251A04C5	DHANAVATH POOJA SREE			
	20251A04F9	GOVINDU PAVANI			



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List of Major Project (2023-2024) 2020 Batch

S.No	Roll No.	Name of the Student	Title of the Project	Name of the Supervisor	Type of Project
1 A13	20251A0446	MALOTHU JAHNAVI	Air pollutants tracking and alerting system in vehicles using embedded system	Prof Ch Ganapathi Reddy	Embedded Systems
	20251A0418	K HEMA CHANDANA			
	20251A0424	PETA SUSHMA			
	20251A0455	SABAVATH DEEKSHITHA			

List of Projects 2022-2023 2019 Batch

S.NO	Roll No.	Name of the Student	Title of the Project	Name of the Supervisor	Type of Project
1	19251A0453	T Sucharitha	Automatic LPG Cylinder Booking and Leakage Detection using IOT	Ms GVSNK SRAVYA	IoT
	19251A0439	Pavithra N			
	19251A0431	K Nikhitha			
	19251A0457	Sathvika Vala			
2	19251A0412	Deekonda Eshwari	Automatic Movable Smart Road Dividers - IOT	Ms M.LAKSHMI	IoT
	20255A0406	Bisai Suneetha			
	19251A0459	V Akanksha			
	19251A0436	Modem Srija			
3	19251A0427	K Keertimayee	Vehicle Safety and accident doctors using IoT	B.Tulasi Sowjanya	IoT
	19251A0435	Mamindla Amulya			
	20255A0419	A Reshmitha			
	19251A0416	G Jyosthnapreethi			
4	19251A0404	B Geetha Vani	Smart Water Management system using IOT	Mrs N. Harini	IoT
	19251A0409	Chavva Kiranmai			
	20255A0405	Kunchala Hemavathi			
	19251A0449	Shaik Shayastha			



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List of Projects 2021-2022 2018 Batch

S.No	Roll No.	Name of the Student	Title of the Project	Name of the Supervisor	Type of Project
1 C3	18251A04E1	PISUPATI SAI VALLI SHIVANI	Women Safety Device with GPS Tracking and Alerts using Arduino	T.Sri Latha	IoT
	19255A0415	MOHMAD NADIYABEGUM			
	18251A04H7	THIGIREDDY SRI BHAVANI			
	18251A04H6	T.HARSHITHA			
2 C4	18251A04E3	PURANAM SRIDEVI	Smart Glove for Speech Impaired	GVSNK Sravya	IoT
	18251A04F5	BOGALAGANI VINEELA			
	18251A04E7	NAGA PRANATHI TODIMALA			
	18251A04G6	ONTEDDU LIKHITHA			
3 B8	18251A0470	Jyothika	Personal Assistance for Disabled People using IoT	P.Chandrasekhar	IoT
	18251A0468	Paidiwar shivani			
	18251A04C0	Y Sharon Priyanka			
	18251A04A4	Sreeshma M			
1 A18	18251A0444	Kuchi L S Rasagjna	IoT based Smart Waste Management System	Mrs M Madhuri Lata	IoT
	18251A0452	Poreddy Pranathi			
2 B6	18251A04B2	P. Navya Sree	Implementation of Aquaculture Monitoring and Controlling Using IoT	Mrs.M.Shanthi	IoT
	18251A0476	M Saisri			
	18251A0479	Sanjana Reddy N			
	18251A0469	Sruthika D			

Lab Incharge

HOD,ECE



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List of Project 2019 Batch

S.No	Roll No.	Name of the Student	Title of the Project	Name of the Supervisor	Type of Project
1 B3	19251A0475	Gaddam Chaitanya	Arduino Based Autonomous Fire Fighting Robot	Mr.Ch.Hari Prasad	Embedded
	19251A0479	Gundala Koustubha			
	19251A0464	Bandlamudi Sathvika			
2 B16	19251A04A6	Returi Nehata Sreeya	Fingerprint Based Bank Locker System using Arduino	Mr.G.Krishna Kishore	Embedded
	19251A04A4	Polaveni Soumya			
	19251A0485	K Aarthi Reddy			
	19251A0483	Jeripothula Swethlana			
3 C2	19251A04F1	METTU BHAVANA REDDY	Density Based Traffic Signal System Using Arduino UNO	Mrs.B.Tulasi Sowjanya	Embedded
	19251A04G3	PENDKER GREESHMA			
	19251A04H1	SHIKARI VAISHNAVI			
	19251A04H5	T NANDINI			

List of Projects 2019 Batch

S.No	Roll No.	Name of the Student	Title of the Project	Name of the Supervisor	Type of Project
1 B3	19251A0475	Gaddam Chaitanya	Arduino Based Autonomous Fire Fighting Robot	Mr.Ch.Hari Prasad	Embedded
	19251A0479	Gundala Koustubha			
	19251A0464	Bandlamudi Sathvika			
2 B16	19251A04A6	Returi Nehata Sreeya	Fingerprint Based Bank Locker System using Arduino	Mr.G.Krishna Kishore	Embedded
	19251A04A4	Polaveni Soumya			
	19251A0485	K Aarthi Reddy			
	19251A0483	Jeripothula Swethlana			
3 C2	19251A04F1	METTU BHAVANA REDDY	Density Based Traffic Signal System Using Arduino UNO	Mrs.B.Tulasi Sowjanya	Embedded
	19251A04G3	PENDKER GREESHMA			
	19251A04H1	SHIKARI VAISHNAVI			
	19251A04H5	T NANDINI			

List of Projects 2018 Batch



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S. No.	Roll No.	Name of the Student	Title of the Project	Name of the Supervisor	Type of Project
1	17251A0470	M V Sai Sree Rekha	Traffic Congestion and Ambulance Management for City Governance using IoT	Mrs.T.Srilatha	IoT
	17251A04B6	Sri Krupa Rachakonda			
	17251A0499	K Ramya Sri			
	18255A0419	Nayakam Soujanya			
2	17251A0475	Niharika B	Design and Implementation of Smart Shopping Trolley with Automated Billing using IoT	Mrs.M.Shanthi	IoT
	17251A04B2	S.Vidya			
	17251A0481	Sanka Sneha			
	18255A0424	Paidipally Asha			

S.No	Roll No.	Name of the Student	Title of the Project	Name of the Supervisor	Type of Project
1 A18	18251A0444	Kuchi L S Rasajna	IoT based Smart Waste Management System	Mrs M Madhuri Lata	IoT
	18251A0452	Poreddy Pranathi			
2 B6	18251A04B2	P. Navya Sree	Implementation of Aquaculture Monitoring and Controlling Using IoT	Mrs.M.Shanthi	IoT
	18251A0476	M Saisri			
	18251A0479	Sanjana Reddy N			
	18251A0469	Sruthika D			
3 B8	18251A0470	Jyothika	Personal Assistance for Disabled People using IoT	P.Chandra Sekhar	IoT
	18251A0468	Paidiwar shivani			
	18251A04C0	Y Sharon Priyanka			
	18251A04A4	Sreeshma M			



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List of M.Tech Projects : Batch 2021-2023

Roll No	Name of the Student	Internal Guide	Project Title
21251DB101	Nidhi Jaiswal	Dr.M.Vijaya Lakshmi	Middleware implementation in Cloud mobility model for internetof smart devices

Outcomes

- Publication of research papers in renowned journals and conferences, contributing to the advancement of IoT knowledge.
- Successful deployment of IoT solutions addressing critical issues in healthcare, smart cities, agriculture, and industrial automation.
- Recognition as a hub for innovation, attracting funding and partnerships from governmental and private entities.

Conclusion

The Center of Excellence in IoT stands as a testament to our dedication to technological advancement and academic excellence. With a focus on innovation, collaboration, and knowledge dissemination, we are poised to continue making significant contributions to the ever-expanding realm of IoT.

Faculty In-charge
Chindam Hari Prasad
Assistant Professor

Dr. K. Ragini
HOD, ECE



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