Infrastructure Facilities

The Department of Computer Science and Engineering provides outstanding and widely utilized laboratories that are used by students and faculty according to their needs and convenience.

The laboratories are well-equipped with cutting-edge technology, equipment and licensed/open source software to support and enhance learning quality of Program-specific curriculum that has been carefully created to reflect modern technological developments.

Technical staff of the department are highly qualified enough to:

- Provide technical assistance to computer users.
- Monitor a computer lab and address all the problems related to hardware/software.
- Open the computers and see all the programs and files for their correctness.
- Inventory Maintenance: stock and accession registers.
- Respond to queries and introduce students to use of computers and peripheral equipment.
- Log equipment damage and malfunctions.
- Offer access to reference manuals and other information to users.
- Maintain regular backups required.
- Ensure discipline in the lab.
- Assist in conduction of competitive exams.

The following are the list of computing facilities available in the department:

- 1. Number of Academic Laboratories:17
- 2. Number of Project Laboratories:04
- 3. Number of Industry Sponsored Laboratories:01
- 4. Number of Research Laboratories:02

Academic Laboratories:

S.No	Name of the	Name of the Important	Ambience of the Laboratory
	Laboratory	equipment	
1.		Configuration: Intel Core i5-4590S@3.00GHz, DDR3 RAM 8GB, HDD SATA 500GB. Softwares: Windows 10 Prof, Python, MS Office, Weka ServerConfiguration: Intel Xeon Hexa Core @1.5GHz, HDD SATA 2TB HDD.	
		Softwares: Windows 2012 Server, Moodles. (Utilized to Conduct examinations, Assignment tests through Moodle.)	

2.	Object Oriented Programming Laboratory (Room No.:A-108)	Configuration: Intel Core i7- 8700@3.20.GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares:Windows 10 Prof,Codeblocks,DevC++, Turbo C++, JDK.	
3.	Data Base Management Systems Laboratory (Room No.: A-109)	Configuration: Intel Core i7/i5 - 8700@3.20.GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, Oracle 11g, MySQL. Server Configuration: Intel Xeon OctaCore@1.7GHz,16GB DDR4 RAM, HDD SATA 1TB. Softwares: Windows Server 2019 Standard, Oracle 11g(Utilized to conduct academic lab DBMS.)	
4.	Data Mining & Analytics Laboratory (Room No.:A-110)	Configuration: Intel Core i7/i5 8700@3.20GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, Oracle11g, MySQL, Weka, Python, JDK	
5.	Python Programming Laboratory (Room No.:B-314)	Configuration: Intel Core i3- 7100@3.9.GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, Python, JDK. GPU Configuration: Intel Corei7 9700, 16GB DDR4 RAM, nVIDIA 2060 Super Graphics Card, 240 GB SSD,1TB SATA HDD, Softwares: Windows 10 Prof, Cuda Support	
6.	Big Data Analytics Laboratory (Room No.:B-315)	Configuration: Intel Core i3- 7100@3.9.GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, Cloudera(Cent OS), Hadoop, Pig, Hive, Sqoop.	

7.	Web Technologies Laboratory (Room	Configuration: Intel Core i3-	
	No.:B-316)	7100@3.9.GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, Apache Tomcat, java, HTML, XML	
8.	Network Security Laboratory (Room No.:B-317)	Configuration: Intel Core i3- 7100@3.9.GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, Turbo C++, Codeblocks, NS3	
9.	Basic Programming and Data Structures Laboratory (Room No.:P-403)	Configuration: Intel Core i5- 4570S@2.90GHz, DDR3 RAM 8GB, HDD SATA 500GB. Softwares:Windows 10 Prof, JDK, Turbo C++, Code blocks.	
10	Operating Systems Laboratory (Room No.:P-404)	Configuration: Intel Core i5- 4570S@2.90GHz, DDR3 RAM 8GB, HDD SATA 500GB. Softwares: Windows 10 Prof, Ubuntu, NS3 Tool, Codeblocks, Turbo C++.	
11.	Software Engineering Laboratory (RoomNo.:P-410)	Configuration: Intel Core i5- 4570S@2.90GHz, DDR3 RAM 8GB, HDD SATA 500GB. Softwares:Windows 10 Prof, IBM RASD, Oracle 11g, Codeblocks, Turbo++. ServerConfiguration: Intel Xeon Dual Core @3.0GHz, 4GB DDR2 RAM, HDD SCSI 500GB. Softwares: Windows 2012 Standard Server (RSAD Software Sharing Server , utilize to conduct academic lab Software Engineering)	

Artificial IntelligenceLabora tory (Room No.:A- 111) Configuration: Intel Core i7- 8700@3.2GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, Python, Turbo C++,Codeblocks, Dev	-
tory (Room No.:A-111) 8700@3.2GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, Python, Turbo	
12. (Room No.:A- RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, Python, Turbo	
12. 111) 1TB. Softwares: Windows 10 Prof, Python, Turbo	
Softwares: Windows 10 Prof, Python, Turbo	
Prof, Python, Turbo	
CTT, Couediocks, Dev	
C++.	
GPU Configuration:	
Intel Corei7 9700, 16GB	
DDR4 RAM, nVIDIA	
2060 Super Graphics	
Card, 240 GB SSD,1TB	
SATA HDD,	
Softwares: Windows 10	
Prof, Cuda Support	
13. Software Design Configuration:	
with UML Intel Core i7-	
Laboratory 8700@3.2GHz, DDR4	
(Room No.:A- RAM 8GB, HDD SATA	
112) 1TB.	
Softwares: Windows 10	
Prof, RSAD, Python,	
Weka, Selenium, Bolt,	
V-Rep Edu, R-Studio,	Y WEST
JDK, HTML, CSS. 14. Linux Configuration:	The second second
Programming Intel Core i7-	
Laboratory (Room 8700@3.2GHz,f DDR4	
No.:A-113) RAM 8GB, HDD SATA	TAIL SECTION
1TB.	LIA BENDE
Softwares: Windows 10	
Prof/Ubuntu, Oracle 11g,	
Weka, Codeblocks,	
Python, Cloudera(Cent	
OS,Hadoop,Pig,Hive,Sqo	
op).	
ServerConfiguration:	
Intel Xeon Dual Core	
@3.0GHz, 4GB DDR2	
RAM, HDD SCSI	
500GB.	
Softwares:RedHat Enterprise Linux Server,	
ftp server.	
15. Compiler Design Configuration:	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Laboratory (Room Intel Core i7-	T
No.:A-114) 8700@3.2GHz, DDR4	- de
RAM-8GB, HDD SATA	
1TB.	
Softwares: Windows 10	
Prof,Codeblocks, TC++	
4.0, Visual Studio Code,	
PHP, MySQL.	
ServerConfiguration:	
Intel Xeon	
OctaCore@1.7GHz,16GB	
DDR4 RAM, HDD SATA	
1TB.	
Softwares:RedHat	
Enterprise Linux Server, lex, flex, gcc.	

16.	Software Testing Laboratory (Room No.:P- 007)	Configuration: Intel Core i5-6400@2.70GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, R-Studio,Selenium,IDE Eclipse,JDK,HTML	
17.	Machine Learning Laboratory (Room No.: P-004)	Configuration: Intel Core i5-6400@2.70GHz, DDR4 RAM 8GB, HDD SATA 1TB. Softwares: Windows 10 Prof, R-Studio, JDK, Cloudera(CentOS, Pig Hadoop, Hive, Sqoop)	

Laboratory Maintenance:

- > Regular checkup of hardware equipment and softwareis carried out at the end of every semester.
- ➤ All computer systems in laboratory are insured.
- > Periodic UPS and Batteries Maintenance.
- Periodic AC Maintenance
- Fire extinguishers are placed in all the labs and they are periodically maintained.



- > Computer Accessories repair or replacement requirements are mailed to support@vnrvjiet.in.
- > Software up gradation.
- > Safety Measures for maintaining COVID protocols as per Post–Lockdown Restart Manual(VJMEDISCINE).



Post Lockdown Restart Manual

- ➤ Continuous internet speed of 1.5Gbps and Wi-Fi speed of 100Mbps is ensured.
- > All Laboratories are having UPS backup support.
- ➤ Laboratory Infrastructure issues are logged in Maintenance register.
- Minor repairs are carried out by the technical staff.
- Major repairs are outsourced as per the institutional policy.
- > Student's login / logout register aremaintained in alllaboratories.

Overall Ambience

- > Department has full-fledged State of Art laboratories to cater to all UG and PG courses as per curriculum requirements.
- > For every lab enough windows are available for ventilation and naturallight.
- > Labs are equipped with sufficient hardware and licensed software to run program specific curriculum and off program curriculum.
- > Lighting system is very effective, along with the natural light in every corner of the rooms.
- > Cupboards are available in each lab for students to place their belongings
- > Each Lab is equipped with white board and Projectors to aid the teachinglearning process.
- > All laboratories are well furnished and maintained daily.
- > All the doors are sufficiently wide and available in adequate numbers, to evacuate people outside in case of emergency.
- > The buildings are designed by professional architects, who gave utmost care in providing academic ambience in all labs.
- > Story boards and Lab Protocols of corresponding laboratory courses are displayed.

Industry Sponsored Laboratory - unPlatforms

unPlatforms is a US based startup company has sponsored a laboratory (P 406) for the students to work on their projects and internships. Presently 5 IV B.Tech CSE students are working as interns.



Facilities:

Hardware: Mi Notebook Ultra Intel Core i7-113, RAM 16 GB, SSD 512GB.

Softwares: Windows 10 Prof, MS Office / Backlit KB, MySql, React, Redux, Figma

Safety Measures in Laboratories

- First aid box, Fire extinguisher.
- Permission denied for pen drives and other output devices.
- Do's & Don'ts in computer labs.
- > Checking the computer unit and its peripherals, identification of defects, error or damage.
- Students must follow all covid related protocols.
- Every Student must be vaccinated.
- > Firewall protection and Antivirus Software.
- Electrical Insulating Mats in UPS Room.

Project laboratory

Department of Computer Science and Engineering has 4 project laboratories(Center for Data Sciences Laboratory, Real Time Computing & Virtual Reality Lab, Python Programming Laboratory and Artificial Intelligence Laboratory) that help students intaking up course based projects, mini projects and major projects. These projects often lead to publications, best project awards and patents. Faculty utilize these laboratories to carry out their research work, paper publications and funded projects. Apart from core computing facilities these project laboratories are equipped with High-End Computing GPUs(2 Nos.) to work on large datasets in the area of Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL), Data Analytics, network security, cloud computing, and cyber security domains. These GPU computers are available online 24/7 and are assigned with Public IPs so that they can be accessed across the globe.

Project Laboratory 1: Center for Data Sciences Laboratory:

Objective:

This center focus on solving real-time problems by utilizing Big Data and Data Science technologies through extensive academic research of faculty, research scholars, post graduate and under graduate students to accelerate the implementation of solutions.





Center for Data Sciences Laboratory

Facilities:

- Hardware: Intel Core i5-4590S@3.00GHz, DDR3 RAM 8GB, HDD SATA 500GB.
- **Software's:** Windows 10 Prof, Python, Weka, RStudio.

Project Laboratory 2: Real Time Computing & Virtual Reality Lab

Facilities:

Hardware: Intel Core i7@2.5 GHz, DDR4 RAM 16GB, HDD SATA 1TB, nVIDIA RTX A 2000 6GB.

Softwares: Windows 10 Prof, Python, Multigen Creator, Maya 3D.

Objectives:

The Real Time Computing &Virtual Reality concept makes reference to any digital environment created by a computer where it is possible to simulate physical situations of the real world, as well as imaginary worlds and seamless integration of digital content with the image that users perceive from the real world. The amount of presence inside a virtual environment is directly related to the degree of immersion of our senses. The most important areas of application are: Design, modelling and visualization of objects and places of interest such as buildings, environments, industrial products, prototypes, etc.; Reconstruction and virtual visits to real historical places and cultural

heritage; Visualization of complex data and simulation of processes. The major objective is to develop a driving simulator software in a 3D virtual environment that simulates professional interpreting practices. To create an adaptive 3D virtual environment that meets the needs of trainee interpreters and those who need to learn about how to drive the vehicle in real time environment.





Real Time Computing & Virtual Reality Lab

Project Laboratory 3: Python Programming Laboratory

Objectives:

Python can be used to develop prototypes, and quickly because it is so easy to work with and read. Most automation, data mining, and big data platforms rely on Python. This is because it is the ideal language to work with for general purpose tasks.

Facilities:

Hardware: Intel Core i3-7100@3.9.GHz, DDR4 RAM 8GB, HDD SATA 1TB.

GPU Configuration:Intel Corei7 9700, 16GB DDR4 RAM, nVIDIA 2060 Super Graphics Card, 240 GB SSD,1TB SATA HDD.

Softwares: Windows 10 Prof, Cuda Support, Python, JDK.

Project Laboratory 4: Artificial Intelligence Laboratory

Objective:

It aims to deploy cutting-edge methodologies in various areas of Artificial Intelligence by conducting research in both the theoretical and application aspects of it. The research focuses on following areas:Knowledge representation and Reasoning,Machine learning,Commonsense reasoning,Cognitive vision,Intelligent robotics,Human computer interaction,Multi-agent systems,Natural language processing.

Facilities:

Hardware: Intel Core i7-8700@3.2GHz,DDR4 RAM 8GB, HDD SATA 1TB.

GPU Configuration:

Intel Core i7 9700, 16GB DDR4 RAM, nVIDIA 2060 Super Graphics Card, 240 GB SSD,1TB SATA

HDD

Softwares: Windows 10 Prof, Cuda Support, Python, Weka.

Project Expo: Evaluates B.Tech final year major projects. Inter departmental faculty and senior faculty of the department assess the projects based on the following criteria: novelty, scope, future enhancement, societal impact. Few best projects are selected and are allowed to be showcased in "Open House"- An Institute Level Project Expo. Details of such best projects are shown in table. One of the project which has high societal impact is displayed as poster in the institute premises

List of Students Best Projects

S.No	Name of Student	Project Title	Name of Project Laboratory	
		Batch: 2015-2019		
	VivekVardhan	Student		
	M. Harshitha	Performance	Centre For Data	
1	V. S. S. Bapiraj	Analysis For	Science	
	P. SnigdhaRao	Outcome Based Education		
	G.D.Reshmant			
2	D.Srikar Reddy	Solar Based E-	Death an Dua anamain a	
2	P.Hareesh	Uniform For Soldiers	Python Programming	
	S.Karthik			
	K SaiRamya			
	K Harshavardhan	Wit And Wil		
3	S N Vineetha	Automation	Python Programming	
	P Naga Tejaswi	— Software		
	R. Sai Krishna	Human Resource		
4	K.Amulya	Reliable And	Duth an Day and a second	
4	K. Sai Chand	Admirable	Python Programming	
	M.Sreya	Ecosystem		
5	NavyaSushmita	Automated Pet Feeding Mechanism	Python Programming	
	P.Geethika	Android Application	Python Programming	
6	I.PranavSouri	Android Application For Self Assessment		
Ü	B.Sai Reddy	Of Health		
	B.Vineela			
	AdityaCheruvu	Asistencia – An Ai		
7	N.SatyaSai	Attendance Marking	Artificial Intelligence	
	R.S.PavanSeshaSai NagababuVeganti	System		
	D. Indumathi	D 11 11 A 1 11		
8	D.Deepika	Predictive Analytics On Seasonal And	Centre For Data	
	D.Naresh	Acute Diseases	Science	
	D.Nai esti	BATCH: 2016-2020		
	Ch. Chandra Kiran			
	K. Prashanth			
	K. Vijay Sagar	Smart Health Card –		
	K. Priyanka	An Android		
1	V Srikala	Application For	Python Programming	
	M Jyothsna	— Medical Data — Maintenance		
	M Meghana	Mannemanee		
	N Sahithi			
	K. Chaitanya	Predicting		
3	M. SaiVenkat	Parkinson's Disease	Centre For Data	
5	M. Tharuni	Using Deep Neural	Science	
	S. Sandeep	Networks		
	D. Mrunalini	Aims (Automated		
4	B. N Prudhvi	Preterm Infant	Centre For Data Science	
	T. Venkat T. Likitha	Monitoring System)		
	i . Likiuia			

	P. Mahitha	Multimedal mestica		
5	D. Keerthana	Multimodal motion	Artificial Intelligence	
	M. Keerthi	Recognition System	Lab	
	V. Suma Sree			
		BATCH: 2017-2021		
	G. Kovid	Virtual Lab		
1	Md. Sameer	Environment For C	Death on Dun announcing	
1	P. Vineeth	Programing Using	Python Programming	
	Syed Khaja	Mean Stack		
	VarshiniDusa	Sign Language		
2	Ajay Jakkanapally	Translator Using	Centre For Data	
_	Sharoncarlina C	Computer Vision	Science	
	SravaniBandaru			
	Ch. Pruthvi	Suspicious Human		
3	N. Rakesh	Activity Detection	Artificial Intelligence	
3	P. Vishay	Using Surveillance	Lab	
	R. Sharath	Camera		
	DurisettiSrinikhil	3d Reconstruction		
4	DarsaniAlapati	Of 2d Medical	Python Programming	
~	SaiKeerthiV	Images And Its	1 yulon i rogramming	
	KothaKeerthana	Processing		
	MMeghana	Prediction Of		
5	NAnanya	Depression In Techies at	Centre For Data	
3	Y. Meghana	Workplaces	Science	
	K. PoornaYamini			
	G. Lahari	Emotion Uncovering,		
6	G. SaiNandini	Post Covid A Deep	Centre For Data	
"	U. Sandhya	Learning Approach	Science	
	V. Ankitha	Learning Approach		





Posters Displaying Societal Impact Projects

The project laboratories of the department encouraged research culture among the faculty. These laboratories facilitated research and created high impact on quality publications as shown in table and generated funded projects as listed in table. It gave a platform for patenting faculty research findings as shown in table while involving students also for a real time experience.

List of Funded/Sponsored Projects

S NO	PROJECT TITLE	FUNDING AGENCY	PRINCIPAL INVESTIGATO R	Total Amt Rs.(In Lakhs)	Status	Name Of The Laboratory
1	Driving Simulator for Indian Environment	M/S X_Design Ventures Pvt. Ltd.	Mr.G.Ramesh Chandra	75.98	Completed (September 2007 – November 2009)	Real Time Computing and Virtual Reality Lab
2	Automated Commando Training System(ACTS)	M/S X_Design Ventures Pvt. Ltd	N.Lakshmi Kalyani	8.52	Completed (2007-2009)	Artificial Intelligence Lab
3	Driver Safety Index using integrated computing system	M/S Drive Lozics	Mr.G.Ramesh Chandra	7.00	Completed (12-8-2011 to 28-1- 2015)	Artificial Intelligence Lab
4	Weapon Locking & Tracking System (WLTS)	(ARDE) (DRDO)	Dr.G.Ramesh Chandra	9.90	Completed (15-07-2014 to 15-03- 2016)	Artificial Intelligence Lab
5	Development and Validation for Non- Technical Losses(NTL's) detection of Electricity Theft using Genetic hybrid SVM	UGC minor	Mrs.S.Nagini	2.50	Completed (17-04-2014 to 20-05- 2016)	Centre for Data Science

	approach					
6	Development of a High level frame work that works on flash TFL 2.0 specification for animated text displkay in e- learning	UGC minor	Mrs.P.Radhika	3.30	Completed (17-04- 2014 to 06- 05-2016)	Centre for Data Science
7	Development of effective Wireless Sensor Network system for Water Quality and Quantity Montoring(Aqua	Media Lab Asia	Dr. C. D. Naidu/ECE, Dr.G.Ramesh Chandra(Co- PI)/CSE	30.18	Complete (Commence ment: 20- 09-2013)	Centre for Data Science
8	ROI Booster	Mira Consulting Inc., Malaysia	Mr. S.V.N. Narayana Rao/ECE	2.34	completed (Commence ment: 16- 04-2015)	Artificial Intelligence Lab
9	A Data Mining Approach for The Efficient Detection of Brain Tumor Disease.	UGC minor	Mrs. B.V.Kiranmaye e	0.65	Completed (Commence ment: October 2016)	Centre for Data Science
10	Design of Hybrid Data Mining Techniques for Effective Retrieval of Information from Cloud based Applications.	UGC minor	Mr.T.Sunil Kumar	0.80	Completed (Commence ment: October 2016)	Python Programming Lab
11	Development of a Tool to Predic Mechanical Properties of Steel by Exploring Data Science Techniques		Dr.N.Sandhya	4.27	On going (Commenc ement: 2-08- 2017)	Centre for Data Science
12	Developing VR- Tour For Warangal Heritage Sites	KUDA HRIDAY	P.Radhika N.LakshmiKaly ani Mr.D.Ramesh Reddy-ECE	10.00	Completed (Commence ment: 29-12- 2018)	Real Time Computing and Virtual Reality Lab
13	White board animation video	Anika Welfare Society	P. TejaswiPotluri S.Jahnavi P.RamaKrishna		Ongoing (Commence ment: 15-03- 2019)	Real Time Computing and Virtual Reality Lab
14	Skill and Personality Development Program Center for SC/ST	AICTE	Dr.T. Sunil Kumar	0	OnGoing (Commence ment: May-2019)	Python Programming Lab
15	Identification of Sickle cell	TEQUIP III JNTUH	Dr. SagarYeruva	3,00,000	OnGoing (Commence	Python Programming

	Anemia using Deep Neural Network				ment: Jul-2019)	Lab
16	Detection of Fraudulent water Pipes under the Ground using Ground Penetrating Rader (GPR) and 3-D image Processing Technique	TEQUIP III JNTUH	Dr. G. Ramesh Chandra	2,96,000	OnGoing (Commence ment: Jul-2019)	Artificial Intelligence Lab
17	Modeling Distributed databases using Ontology	TEQUIP III JNTUH	R. Kranthi Kumar	3,00,00 0	OnGoing (Commence ment: Jul-2019)	Python Programming Lab
18	Design and development of Prototype for secure Weapon shooting Information system	DRDO(CARS	Dr.G.Ramesh Chandra Dr.P.Subash Mr.Naveen Kumar – ECE	9,96,00 0	Ongoing (Commence ment: 31-08- 2021)	Artificial Intelligence Lab
19	Design and Development of Night Vision Imaging LIDAR and Laser 3-D imaging System for home land security and other surveillance applications in Defence	DRDO(EP & IPR)	Dr.G.Ramesh Chandra Dr.M.satyanara yana-ECE Dr.Y.Chalapath Rao-ECE Dr.L.Srinivasar ao-H&S	00	Ongoing (Commence ment: 15-05- 2020)	Artificial Intelligence Lab