Department of Computer Science & Engineering CUFE

Lab Configuration details

Computer System configuration	**Total Number**
215 - Intel(R)Core(TM) i3-2100CPU @ 3.10GHz 3.10GHz , 6-GB Ram, 500-GB HDD	50
215 - Intel(R)Core(TM)i3-2100CPU @ 3.10GHz 3.10GHz, 4-GB Ram, 500-GB HDD	5
217 - Intel(R)Core(TM) i5-3340CPU @ 3.10GHz 3.10GHz, 16-GB Ram, 500-GB HDD	52
13 - Intel(R)Core(TM)i3-2100CPU @ 3.10GHz 3.10GHz, 4-GB Ram, 500-GB HDD	60

Licensed Software & Generic Public Licensed Software

SPSS Software	**Licensed**
MATLAB Campus Level License	**Licensed**
Visual Studio- Dream Spark License	**Licensed**
Linux Cent OS	**Generic Public License**
Windows 7 Professional 64bit	**Licensed**
Eclipse IDE	**Licensed**
Netbeans	**Licensed**
Dev C/C++	**Generic Public License**

Curriculum Laboratories

C Programming Lab
Object Oriented Programming Concepts Lab
Data Structures Lab
Operating System Lab
Object Oriented Programming Lab
Database Management Systems Lab
Networks Lab
Internet Programming Lab

Research Laboratories

Machine Learning Lab
CISCO Network Academy Lab

Computer Programming Laboratory

- The major objective of this lab is to induce basic C programming skill to students. Students will be trained to develop skills in problem solving concepts through learning C/C++ programming in practical approach. Here students will learn various trained how to write algorithm ,flowchart, structure of c program, various looping statements etc.. which are necessary in solving a generalized problems.

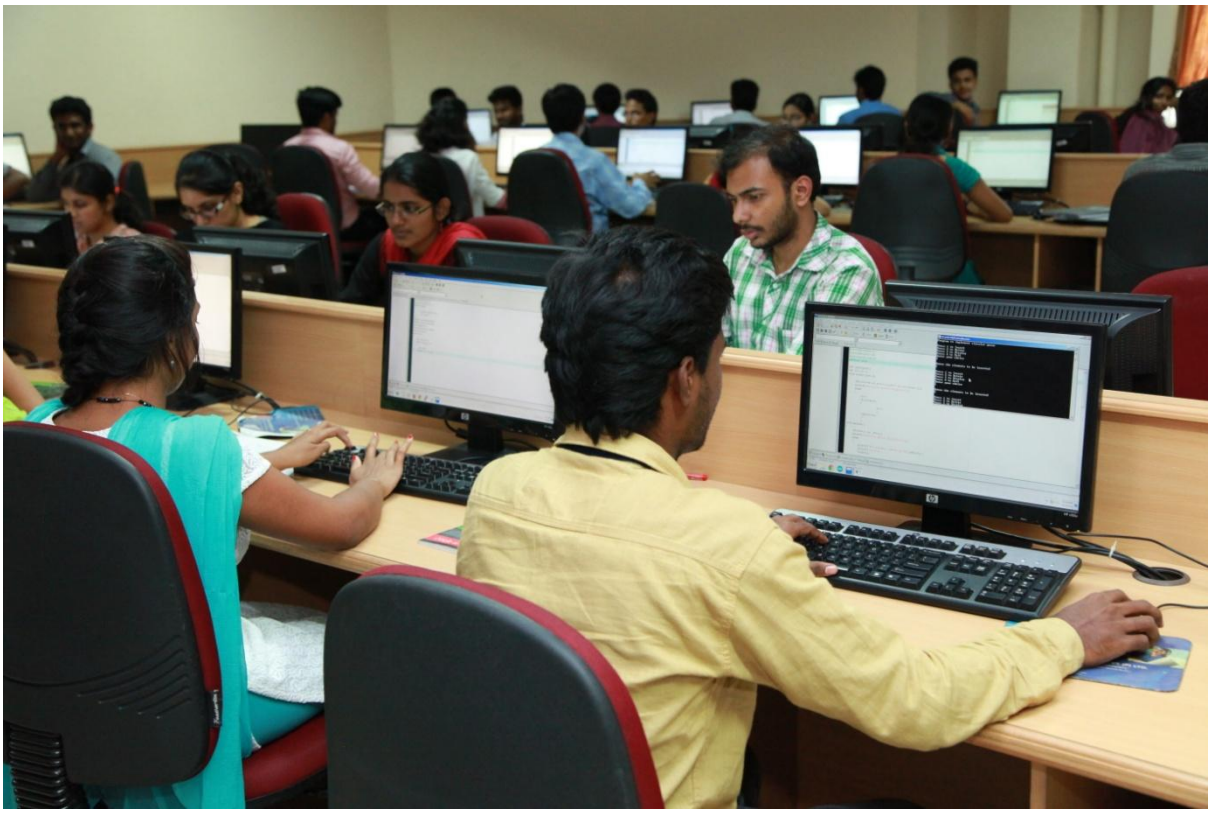
Object Oriented Programming Concepts Laboratory

The main objective of this laboratory is to induce objected oriented programming through Java . In this lab students are trained with basic OOP principles, which are fundamental concepts using which they can program , also students are trained in basics of java programming which is widely used programming in most of software companies. In this lab the students are encouraged to solve real world problems through OOP.

Operating Systems Laboratory

The main objective of this lab is to induce knowledge of Operating systems concepts and basic UNIX programming concepts. The students are exposed to work with the working of various operating system features like CPU scheduling, system calls, memory management, etc.., During this lab session students will be familiarized with operating system design constructs.

Data Structures and Algorithms Laboratory



The main objective of this lab is to induce the knowledge simple version of some data structures, namely Linked List and Array List, and use them to implement a simple sorting algorithm. This exercise will help the students to explore the effect of data structures on the complexity of the algorithm and also understand the details involved in creating data structures from scratch. also the students will implement the same algorithm using C/C++'s Standard Template Library, which implements a more sophisticated version of those data structures. The Standard Template Library (STL) will be very useful in implementing algorithms for this course.

Database Management System Laboratory

The main objective of this lab is to provide a strong formal foundation in database concepts, technology and practice to the participants to groom them into well-informed database application developers, rather than imparting isolated knowledge/experience fragments in each of concepts, technology and practice, this lab will aim at achieving a good blend of the three. The overriding concern is to include enough theory concepts and to motivate and enrich the practical component, and to include technology component to maximize the relevance of the course to the industry without sacrificing the long-term objectives of rigor and foundational strength that can withstand the vagaries of technological advances.

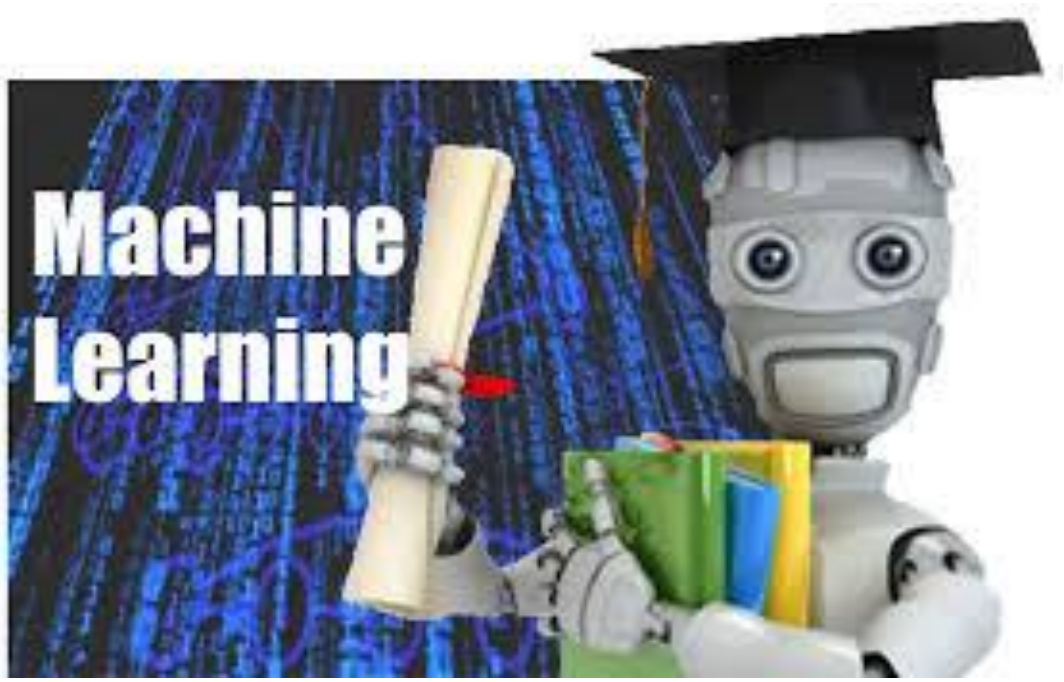
Network Laboratory

The main aim of this lab is to induce introductory course on computer networking. It focuses on explaining how the Internet works, ranging from how bits are modulated on wires and in wireless to application-level protocols, principles of how to design networks and network protocols, fundamental problems of computer networking, from sending bits over wires to running distributed application, error detection and correction, multiple-access, bandwidth allocation, routing, internetworking, reliability, quality of service, naming, content delivery, and security, a detailed understanding of widely-used networking technologies such as TCP/IP, HTTP, 802.11, Ethernet, and DNS. The students were given hands on experience on how routing protocol working, client server communication, application of cryptography on data.

Internet Programming Laboratory

The main aim of this lab is to induce the knowledge of Web programming. Here students are exposed to build a static web site using only HTML/XHTML as the first program, but ends up with supporting object oriented programming, Write a valid standards-conformant HTML document involving a variety of element types, including hyperlinks, images, lists, tables, and forms .Use CSS to implement a variety of presentation effects in HTML and XML documents, including explicit positioning of elements, demonstrate techniques for improving the accessibility of an HTML document. This lab will increase the creative thinking of students as designing web pages involves high creativity.

Machine Learning Lab



This Research Lab is dedicated for research scholars and students who want to learn or do the research on machine learning. Machine learning is the science of getting computers to act without being explicitly programmed. In the past decade, machine learning has given us self-driving cars, practical speech recognition, effective web search, and a vastly improved understanding of the human genome. Machine learning is so pervasive today that you probably use it dozens of times a day without knowing it. Many researchers also think it is the best way to make progress towards human-level AI. In this class, you will learn about the most effective machine learning techniques, and gain practice implementing them and getting them to work for yourself. More importantly, you'll learn about not only the theoretical underpinnings of learning, but also gain the practical know-how needed to quickly and powerfully apply these techniques to new problems.