TECHNO-WIZARDS
2020-2021

E.G.S PILLAY ENGINEERING COLLEGE
(AUTONOMOUS)
NAGAPATTINAM

Department of Computer Science & Engineering

INDEX

MESSAGE

Chev.S.Paramesvaran

I deem it a great pleasure and privilege to congratulate the faculty members as they bring out their magazine.This magazine represents the newest channel to showing out the talents of our students.

We hope that this magazine will become the ultimate focus for your partcipation as we seek to strengthen and enhance our collaboration of knowledge.

Dr.S.Ramabalan

My Heartfelt congratulations for this new release of magazine.A milestone achievement indeed! There is no doubt in my mind that it will serve as a beacon to the future generations.I wish you success in all your endeavours.

Dr.M.Chinnadurai

I congratulate the members for releasing their magazine.This magazine is started with view to broadcast the various events for the student intelligence. Individually and collectively,this magazine is a measure of our success and foundation of our future.I wish you all the very best.

Department of Computer Science and Engineering

Vision of the Department

To produce globally competent computer professionals capable of adapting to the everchanging technological trends of Industry and Society

Mission of the Department

- To build the core competence desirable for a computer professional such as design,development, testing and maintenance of software systems to work on real world projects,and meet-the expected standards of Industries

- To train the students to acquire higher order skills of emerging technologies to make them preferable for employers

- To provide state-of-the-art learning facilities for effective implementation of learnercentric teaching–learning process to develop professional skills, self-learning and lifelonglearning capabilities

State the Program Educational Objectives (PEOs)

The programme Educational Objectives are

- To develop strong knowledge and skills in the domain of Computer Science and Engineering for leading a successful career in industries or entrepreneurial endeavours.
- To prepare and assist the graduates to be successful in higher education and research activities in the theory and application of computing related engineering fields.
- To train the graduates to learn and adapt to the ever-changing world of technology.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

After the successful completion, the graduates will have

PSO 1. The ability to apply software engineering principles and practices to design and develop software systems that meet the automation needs of industrial and societal problems.

PSO 2. The ability to apply their technical skills and knowledge gained in the fields such as Artificial Intelligence, Data Science, Cloud Computing, Social Network Analysis and Mobile Application development.

PO1: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

NEW TRENDINGS 2020-2021

DATA SCIENCE

Data science is an interdisciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from noisy, structured and unstructured data, and apply knowledge and actionable insights from data across a broad range of application domains.

FULL STACK DEVELOPMENT

Full stack development: It refers to the development of both **front end**(client side) and **back end**(server side) portions of web application.

Full stack web Developers: Full stack web developers have the ability to design complete web applications and websites. They work on the frontend, backend, database and debugging of web applications or websites.

EDGE COMPUTING

Edge computing is a distributed information technology (IT) architecture in which client data is processed at the periphery of the network, as close to the originating source as possible. Data is the lifeblood of modern business, providing valuable business insight and supporting real-time control over critical business processes and operations.

BIG DATA ANALYTICS

Big data analytics is the use of advanced analytic techniques against very large, diverse big data sets that include structured, semi-structured and unstructured data, from different sources, and in different sizes from terabytes to zettabytes. With big data analytics, you can ultimately fuel better and faster decision-making, modelling and predicting of future outcomes and enhanced business intelligence.

HUMAN AUGMENTATION

Human augmentation refers to technologies that increase human productivity. It also improves or restores the human body or mental capabilities. Its goal is to improve the human experience in both cognitive and physical ways. It is still a hazy concept. But, advancements in this technology will improve critical areas. These areas are human health, quality of life, and performance.

VOICE SEARCH TECHNOLOGY

Voice search is a technology that allows the user to use a voice command to perform a search on the Internet, a website or an application. The result of advances in speech recognition, this feature first appeared on smartphones, making it possible to replace the search bar. Today, voice search is increasingly becoming a new way of making queries on the Internet, as evidenced by the emergence of new products such as voice assistants (Alexa with Amazon Echo, Google Voice Search, Cortana, Siri…).

GENOMICS

An organism's complete set of DNA is called its genome. Virtually every single cell in the body contains a complete copy of the approximately 3 billion DNA base pairs, or letters, that make up the human genome. With its four-letter language, DNA contains the information needed to build the entire human body. A gene traditionally refers to the unit of DNA that carries the instructions for making a specific protein or set of proteins.

INTERNET OF THINGS

The internet of things (iot) is the ability to have devices communicate with one another via the internet or other networks, remotely tracking information to provide feedback to assist with decision making for commercial, industrial and residential purposes. This is commonly done using sensors connecting to a back-to-base system.

DEVSECOPS

DevSecOps stands for development, security, and operations. It's an approach to culture, automation, and platform design that integrates security as a shared responsibility throughout the entire IT lifecycle. DevOps isn't just about development and operations teams. If you want to take full advantage of the agility and responsiveness of a DevOps approach, IT security must also play an integrated role in the full life cycle of your apps.
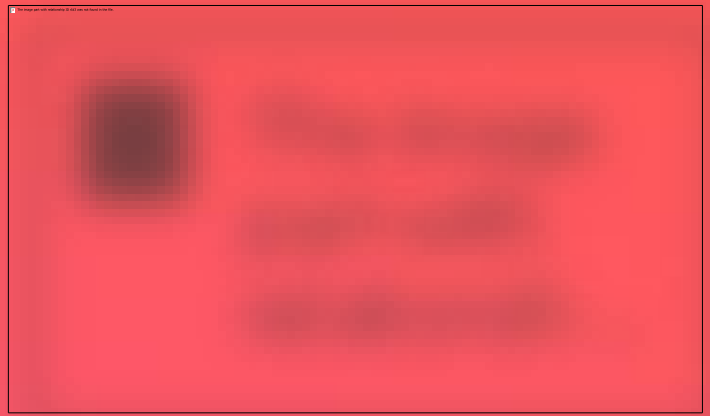
DRONES

The term "drone" usually refers to any unpiloted aircraft. Sometimes referred to as "Unmanned Aerial Vehicles" (UAVs), these crafts can carry out an impressive range of tasks, ranging from military operations to package delivery. Drones can be as large as an aircraft or as small as the palm of your hand.

TOP 5 MNC COMPANIES

Accenture plc is an Ireland-based multinational professional services company that specialise in information technology (IT) services and consulting. A Fortune Global 500 company, it reported revenues of $50.53 billion in 2021.

ACCENTURE

Accenture began as the business and technology consulting division of accounting firm Arthur Andersen in the early 1950s when it conducted a feasibility study for General Electric to install a computer at Appliance Park in Louisville, Kentucky, which led to GE's installation of a UNIVACI computer and printer, believed to be the first commercial use of a computer in the U.S. Joseph Glickauf, an early pioneer of computer consulting, held a position as head of Arthur Andersen's administrative services division.

THE BUSINESS IS ORGANISED AS FOLLOWS:

Accenture Strategy and Consulting provides business strategy, technology strategy, operations strategy services,[54] as well as technology, business and management consulting services.

Accenture Interactive (formerly Digital) provides digital marketing, analytics and mobility services.

Accenture Technology focuses on technology software, implementation, delivery, and research & development, including its Technology Labs for emerging technologies.

DXC Technology

DXC Technology was founded on April 3, 2017 when the Hewlett Packard Enterprise Company (HPE) spun off its Enterprise Services business and merged it with Computer Sciences Corporation (CSC).[5] At the time of its creation, DXC Technology had revenues of $25 billion, employed 170,000 people and operated in 70 countries.[6] By June 2021, the employee count of DXC has come down to 134,000.

The spinoff from Hewlett Packard Enterprise did not include two parts of the Enterprise Services segment: the Mphasis Limited reporting unit and the Communications and Media Solutions product group.
In India, the company started a three-year plan to reduce the number of offices in the country from 50 to 26, and reduce headcount by 5.9% (around 10,000) employees.[8] With about 43,000 employees (more than 1/3rd of its workforce) in India, the company is restructuring its workforce to meet its new revenue profile.

In 2017, DXC split off its US public sector segment to create a new company, Perspecta Inc. In 2019 Mike Salvino was named president and CEO of DXC Technology. He previously served as group chief executive for Accenture Operations.In February 2021, French technology services and consulting firm Atos ended talks for a potential acquisition of DXC . Atosc has proposed for US$10 billion including debt for acquisition.

Cognizant®

Digital Experience

    Cognizant is an American multinational information technology services and consulting company. It is headquartered in Teaneck, New Jersey, United States. Cognizant is part of the NASDAQ-100 and trades under CTSH. It was founded as an in-house technology unit of Dun & Bradstreet in 1994, and started serving external clients in 1996.

    Like many other IT services firms,[citation needed] Cognizant follows a global delivery model based on offshore software R&D and offshore outsourcing. The company has a number of offshore development centers outside the United States and near-shore centers in the U.S., Europe and South America.

In its early years, Cognizant gained business from a number of American and European companies with the help of the Dun & Bradstreet brand.

Capgemini

Capgemini SE is a French multinational information technology (IT) services and consulting company.

The Capgemini Group Executive Committee consists of 27 members. On 20 May 2020, Aiman Ezzat was appointed as the new CEO. He is associated with Capgemini for more than 20 years. From 2005 to 2007, Aiman was Capgemini's Deputy Director of Strategy. In November 2007, Ezzat was appointed COO of the Financial Services Global Business Unit, and became its Global Head in December 2008 till 2012. From January 2018 to May 2020, he served as Chief Operating Officer and prior to this as Chief Financial Officer, from December 2012 to 2018.

From 2012 to 2020 Paul Hermelin served as the Group Chairman and CEO. He joined Capgemini in 1993 and was appointed as its CEO in 2002. In May 2012, Hermelin became chairman and CEO of the Capgemini Group. He succeeded Serge Kampf, who served as the Vice Chairman of the Board until his death on 15 March 2016.

In May 2020, Aiman Ezzat succeeded Paul Hermelin as CEO. Paul Hermelin continues as Chairman of the Board of Directors

MICROSOFT CORPORATION

Microsoft Corporation is headquartered in Redmond, Washington, and is one of the largest companies in the world and lead a list of Top 10 IT Companies. Microsoft has been pulling big numbers throughout the years. Microsoft's financial stats show the company's annual revenue surpassed $100 billion in 2018, reached $125.84 billion in 2019, and saw a 17% increase from 2020 to 2021.

The products like Microsoft Windows, Microsoft Office, and Internet Explorer etc is being used by almost by almost every professional in the world. Microsoft was founded by Bill Gates and Paul Allen on 4, April, 1975, and it has expanded its market share by diversifying its services from operating system market to other various software products. It also took advantage of inorganic growth i.e. improve its revenue by acquiring no. of companies.

Lastly Microsoft has acquired Linkedin which is considered to be largest acquisition for 26.2 billion dollars in 2016 and also it has acquired skype technologies for 8.5 billion dollars in the year 2011. There is a new paradigm shift in technology with the rapidly evolving environment and Microsoft is trying to lead this new era as a front runner. Looking forward Microsoft is focussing on new innovative technologies like Machine Learning, AI and cloud computing to drive new growth that can help them building their own digital capability and provide robust solutions for various users.

TOP 5 SOFTWARE COMPA

Alphabet Inc. is an American multinational technology conglomerate holding company headquartered in Mountain View, California. It was created through a restructuring of Google on October 2, 2015, and became the parent company of Google and several former Google subsidiaries. The two co-founders of Google remained as controlling shareholders, board members, and employees at Alphabet. Alphabet is the world's third-largest technology company by revenue and one of the world's most valuable companies. It is one of the Big Five American information technology companies, alongside Amazon, Apple, Meta and Microsoft.

The establishment of Alphabet Inc. was prompted by a desire to make the core Google business "cleaner and more accountable" while allowing greater autonomy to group companies that operate in businesses other than Internet services. Founders Larry Page and Sergey Brin announced their resignation from their executive posts in December 2019, with the CEO role to be filled by Sundar Pichai, also the CEO of Google. Page and Brin remain co-founders, employees, board members, and controlling shareholders of Alphabet Inc.

Facebook is an American online social media and social networking service owned by Meta Platforms. Founded in 2004 by Mark Zuckerberg with fellow Harvard College students and roommates Eduardo Saverin, Andrew McCollum, Dustin Moskovitz, and Chris Hughes, its name comes from the face book directories often given to American university students. Membership was initially limited to Harvard students, gradually expanding to other North American universities and, since 2006, anyone over 13 years old. As of 2020, Facebook claimed 2.8 billion monthly active users, and ranked fourth in global internet usage. It was the most downloaded mobile app of the 2010s.

Facebook can be accessed from devices with Internet connectivity, such as personal computers, tablets and smartphones. After registering, users can create a profile revealing information about themselves. They can post text, photos and multimedia which are shared with any other users who have agreed to be their "friend" or, with different privacy settings, publicly. Users can also communicate directly with each other with Facebook Messenger, join common-interest groups, and receive notifications on the activities of their Facebook friends and the pages they follow.

Tencent Holdings Ltd., also known as Tencent is a Chinese multinational technology and entertainment conglomerate and holding company headquartered in Shenzhen. It is also the largest company in the video game industry in the world based on its investments, with Tencent Games being its subsidiary focused on publishing of games.

Founded in 1998, its subsidiaries globally market various Internet-related services and products, including in entertainment, artificial intelligence, and other technology. Its twin-skyscraper headquarters, Tencent Seafront Towers (also known as Tencent Binhai Mansion) are based in the Nanshan District of Shenzhen.

Tencent is the world's largest video game vendor, as well as one of the most financially valuable companies.[8] It is among the largest social media, venture capital, and investment corporations.Its services include social networks, music, web portals, e-commerce, mobile games, internet services, payment systems, smartphones, and multiplayer online games. It operates the instant messengers Tencent QQ and WeChat, and QQ.com. It also owns Tencent Music.

Cisco (officially known as Cisco Systems, Inc.) is an American multinational technology conglomerate corporation headquartered in San Jose, California. Integral to the growth of Silicon Valley, Cisco develops, manufactures, and sells networking hardware, software, telecommunications equipment and other high-technology services and products. Cisco specializes in specific tech markets, such as the Internet of Things (IoT), domain security, videoconferencing, and energy management with leading products including Webex, OpenDNS, Jabber, Duo Security, and Jasper. Cisco is one of the largest information technology companies in the world ranking 63 on the Fortune 100 with $49 billion in revenue and nearly 80,000 employees.

Cisco Systems was founded in December 1984 by Leonard Bosack   and Sandy Lerner, two Stanford University computer scientists who had been instrumental in connecting computers at Stanford. They pioneered the concept of a local area network (LAN) being used to connect distant computers over a multiprotocol router system. By the time the company went public in 1990, Cisco had a market capitalization of $224 million; by the end of the dot-com bubble in the year 2000.

Intel Corporation, stylized as intel, is an American multinational corporation and technology company headquartered in Santa Clara, California. It is the world's largest semiconductor chip manufacturer by revenue, and is the developer of the x86 series of microprocessors, the processors found in most personal computers (PCs). Incorporated in Delaware,[6] Intel ranked No. 45 in the 2020 Fortune 500 list of the largest United States corporations by total revenue for nearly a decade, from 2007 to 2016 fiscal years.
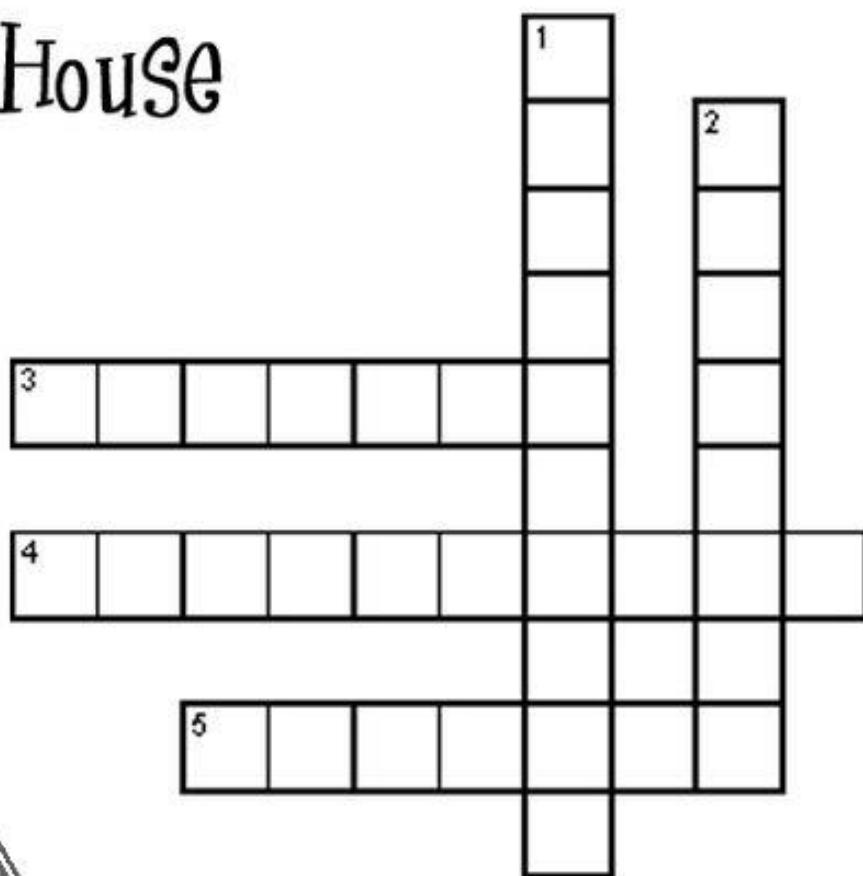
Intel supplies microprocessors for computer system manufacturers such as Acer, Lenovo, HP, and Dell. Intel also manufactures motherboard chipsets, network interface controllers and integrated circuits, flash memory, graphics chips, embedded processors and other devices related to communications and computing.

Intel (integrated and electronics) was founded on July 18, 1968, by semiconductor pioneers Gordon Moore (of Moore's law) and Robert Noyce, and is associated with the executive leadership and vision of Andrew Grove. Intel was a key component of the rise of Silicon Valley as a high-tech center. Noyce was a key inventor of the integrated circuit (microchip).[citation needed] Intel was an early developer of SRAM and DRAM memory chips, which represented the majority of its business until 1981. Although Intel created the world's first commercial microprocessor chip in 1971, it was not until the success of the personal computer (PC) that this became its primary business.

CEO of INDIAN companies

Company	CEO
Adani Group	Sudipta Bhattacharya
Aditya Birla Group	Dr.Santrupt Misra
Air India	Ashwani Lohani
Allahabad Bank	Usha Ananthasubramanian
Amazon.com	Jeff Bezos
Ambuja Cements	Ajay Kapur
Amul	R.S. Sodhi
Andhra Bank	J Packirisamy
Apollo Hospitals	Prathap C Reddy
Apple Inc.	Tim Cook
Ashok Leyland	Vinod K. Dasari
Asian Paints	K.B.S. Anand
Axis Bank Ltd.	Amitabh Chaudhry
Bajaj Auto	Rajiv Bajaj
Bank of Baroda	P. S. Jayakumar
Bank of India	Dinabandhu Mohapatra
Bharat Heavy Electricals Ltd(BHEL)	Atul Sobti
Bharat Petroleum	D. Rajkumar
Bharat Sanchar Nigam Ltd (BSNL)	Shri Anupam Shrivastava
Bharti Enterprises	Sunil Bharti Mittal
Bombay Dyeing	Nusli Wadia
Canara Bank	Rakesh Kumar sharma
CIPLA	Umang Vohra
Dena Bank	Shri Karnam Sekar
DLF	T.C.Goyal
Federal Bank	Shyam Srinivasan
Flipkart	Sachin Bansal
GAIL	B.C. Tripathi
HCL Technologies	C Vijayakumar
HDFC Bank	Aditya Puri
Hero Motocorp	Pawan Munjal
ICICI Bank	Sandeep Bakhshi
IDBI Bank	B Sriram
Vodafone Idea Ltd.	Balesh Sharma
Indian Overseas Bank	R. Subramaniakumar
Infosys Technologies	Salil Parekh
Jet Airways	Vinay Dube
Jindal Steel	Mr. Naushad Akhter Ansari
Karbonn Mobiles	Pradeep Jain
Kingfisher Airlines	Sanjay Aggarwal
Kotak Mahindra Bank	Uday Kotak
Larsen & Toubro	Subrahmanyan
Mahanagar Telephone Nigam Ltd	Pravin Kumar Purwar
Mahindra & Mahindra	Anand Mahindra
Maruti Suzuki	Kenichi Ayukawa
Micromax Mobile	Rahul Sharma
NDTV	Suparna Singh
Oil and Natural Gas Corporation	Shashi Shanker
Punjab National Bank	Sunil Mehta
Reliance Industries	Mukesh Ambani
Royal Enfield	Siddhartha Lal
Snapdeal	Kunal Bahl
South Indian Bank	V. G. Mathew

My House

Across
3. Where do you cook?
4. Where do you eat dinner?
5. Where do you sleep?

Down
1. Where do you watch TV?
2. Where do you brush your teeth?

Taking the Test :

You should work quickly and accurately through the test. Don't get stuck on any particular question: should you have any problems, return to it at the end of the test. You should divide your time per question as accurately as you can - typically this will be between 50 and 90 seconds per question. Remember that the tests are difficult and often you will not be expected to answer all the questions. Be particularly cautious if the aptitude test uses negative marking; if this is not the case, answer as many questions as possible in the time given. Remember that multiple-choice options are often designed to mislead you, with incorrect choices including common mistakes that candidates make.

Taking the Test :

You may also like to read:
• How to prepare for SHL tests. A general p   r   i   m   e   r   .
• What is a psychometric test?. All the info you'll need on psychometric testing.
• What is the UKCAT?. Who will need to take the UKCAT test and how it's structured.
• What is an In-Tray test?. How to approach this type of exercise, and tips for success.
• What are your weaknesses?. How to gauge where   your   weaknesses   lie.

Tips For Success :

These five tips are well worth remembering before you take an aptitude test for real:
• Treat the test like you would any other exam.
• Work swiftly and accurately through any test.
• Work out the maximum time you can spend on any question and stick to it religiously. You can return to questions at the end. Never get stuck on any particular question, even if you think   you   nearly   have   it.
• If you are going to an assessment centre, take a calculator you understand with you. If you do not, you will be forced to use whatever they   might   provide   you   with.
• Answer as many questions as possible in the time given. But be wary of negative marking. WikiJob recommends taking practice reasoning tests for better performance during the examination. Our partner JobTestPrep has copious sample tests to try, until you have really mastered this type of assessment. You may also want to look at this psychometric workbook, which covers numerical, verbal and spatial reasoning tests, with hundreds of practice questions.

Taking the Test :

Computer science is a branch of engineering that deals with the scientific study of computers and their usage like computation, data processing, systems control,advanced algorithmic properties, and artificial intelligence. The study of computer science includes programming, design, analysis and theory. Computer science engineering projects involve designing and development of various application-based software. Computer science project topics can be implemented by a number of tools such as Java, .NET, Oracle, etc. The list of computer science project ideas is as follows.

All of these projects listed in the above list are the latest computer science project topics for engineering students that are widely implemented by the professionals.We believe that by giving this information, we have been successful to afford you the best list from the lot, and therefore anticipate your suggestions, comments, and queries on this particular article.

Best project

ON LINE SOCIAL NETWORK

Today's modern life is completely based on Internet. Now a day's people cannot imagine life without Internet. From last few years people share their views, ideas, information with each other using social networking sites. Such interchanges might include diverse sorts of substance such as text, image, audio and video data. One fundamental issue in today On-line Social Networks (OSNs) is to give users the ability to control the messages posted on their own private space to avoid that unwanted content is displayed. Up to now OSNs provide little support to this requirement. Hence Online Social Networks should be extremely secure and should protect the individual's privacy.
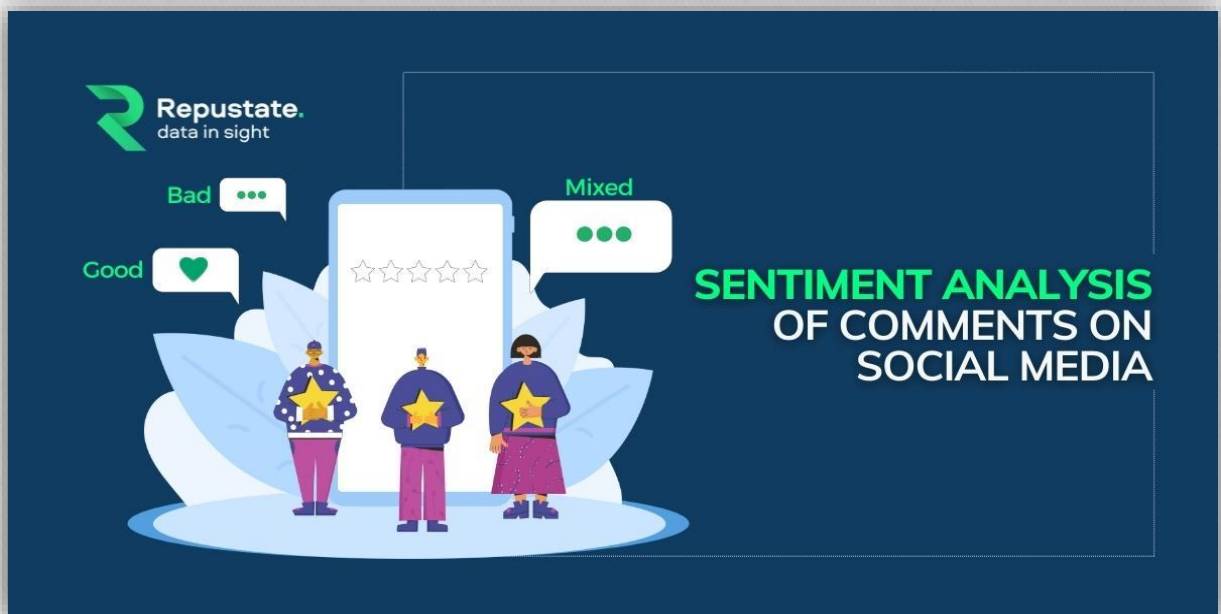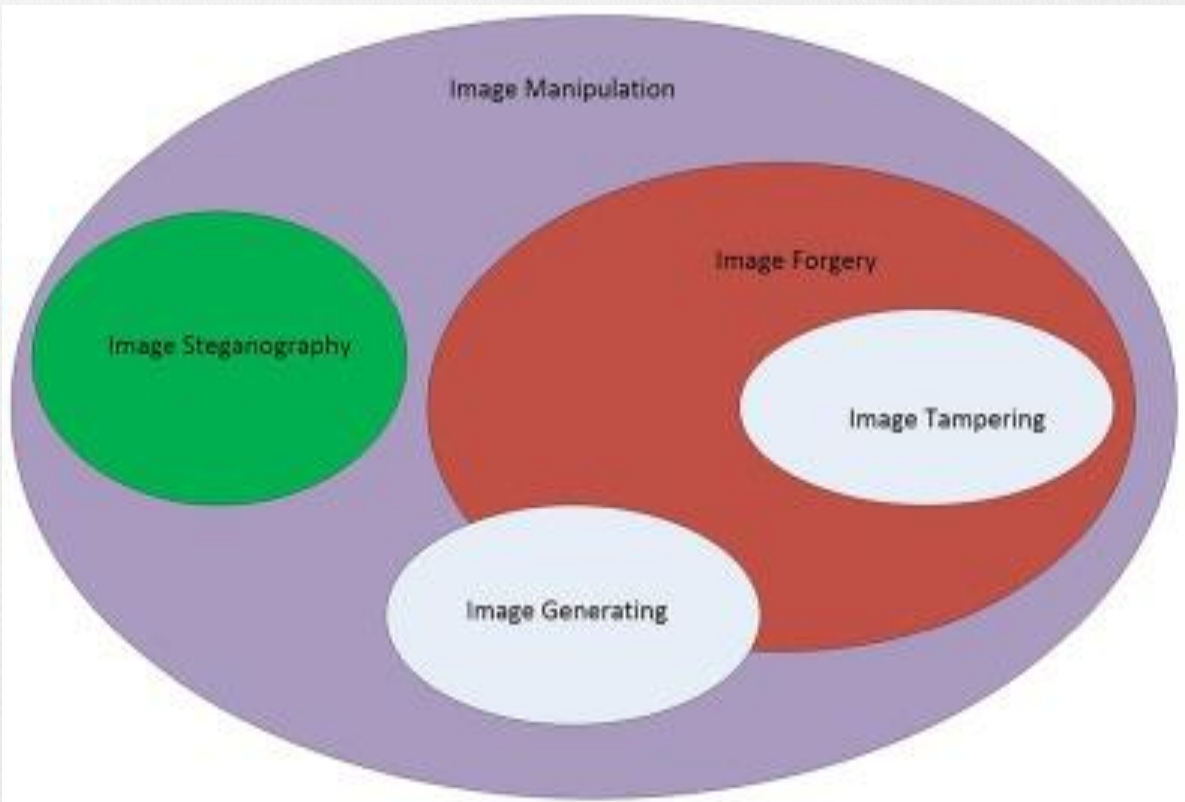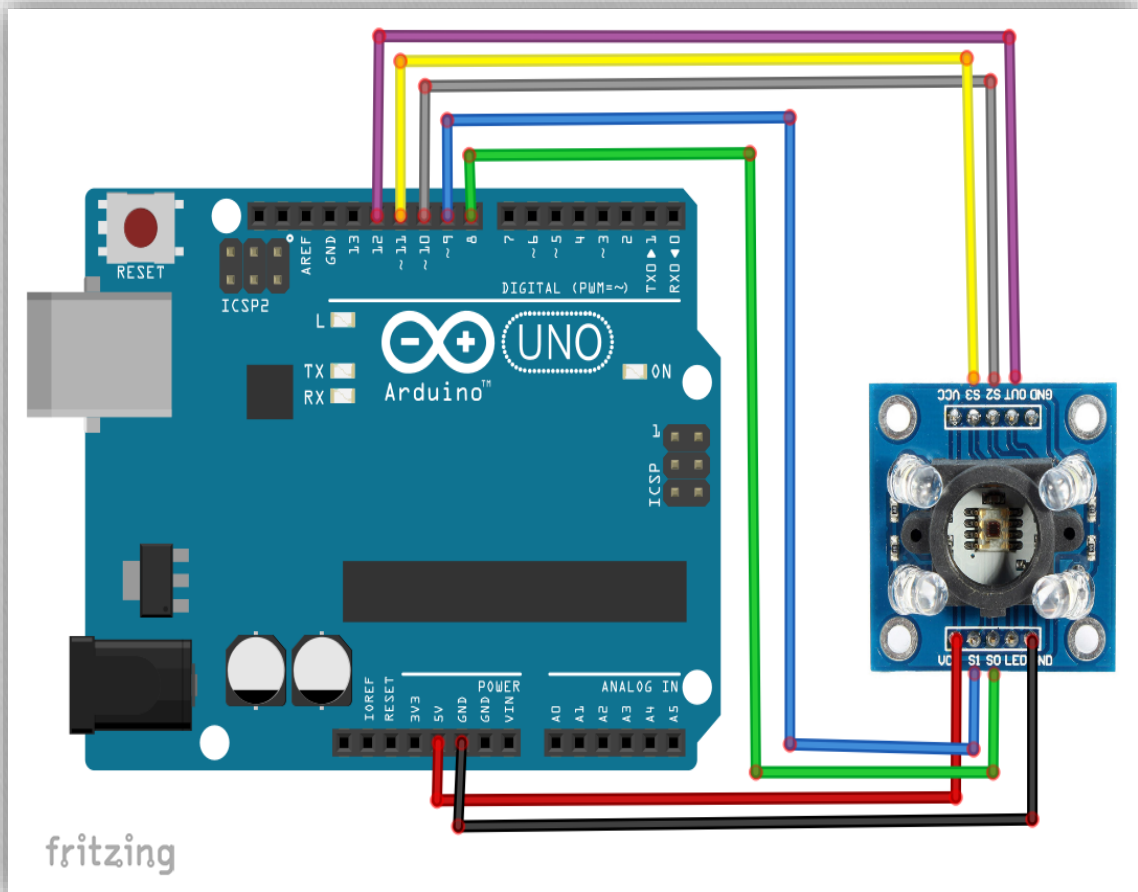
IMAGE RECOLOUR PROPAGATION

Image recolor propagation is a technique that can propagate various image edits (e.g., colorization and recoloring) performed via user strokes to the entire image based on similarity of image features. In most previous work, users must manually determine the importance of each image feature (e.g., color, coordinates, and textures) in accordance with their needs and target images. It focus on representation learning that automatically learns feature representations only from user strokes in a single image insteadof tuning existing features manually. To this end, this project proposes an edit propagation method using a
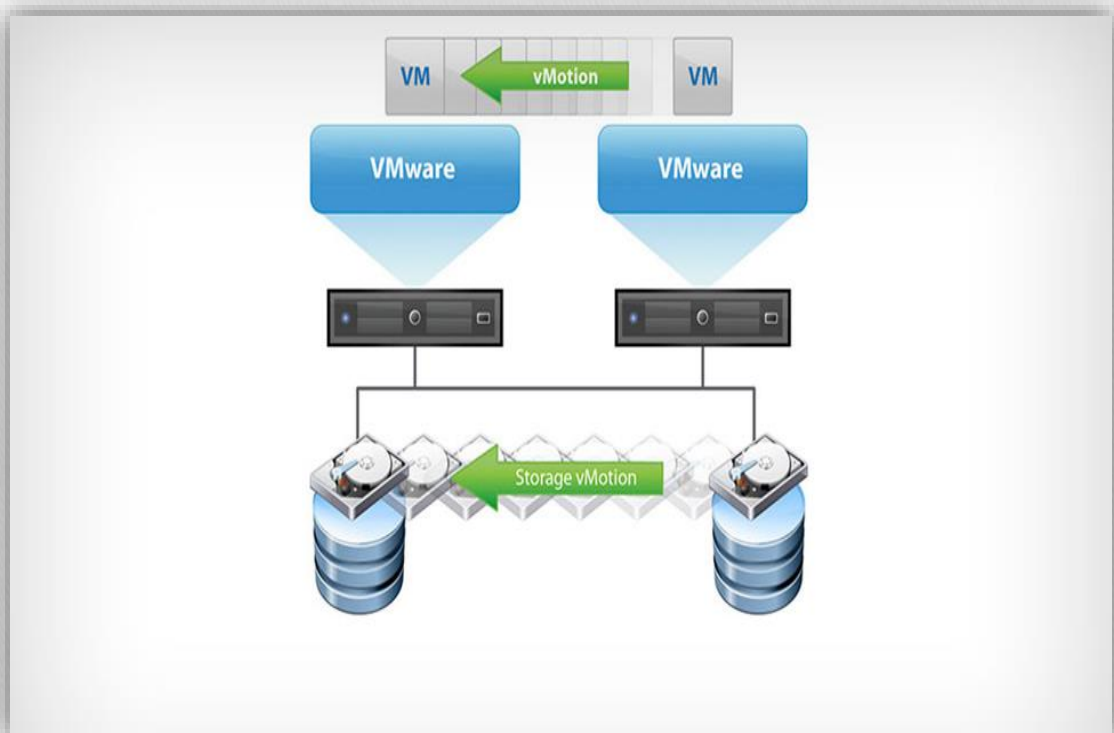
deep neural network (DNN).

AUTOMATIC SORTING OF OBJECTS

Project describes a working prototype designed for Automatic Sorting of object based on the Color. Sorting of products is a very difficult industrial process. Continuous manual sorting creates consistency issues. This paper describes a working prototype designed for automatic sorting of objects based on thecolor.TCS230 Sensor was used to detect the color of the product and the PIC16F628. A microcontroller was used to control the overall process. The identification of the color is based on the frequency analysis of the output ofTCS230 sensor.

VIRTUALIZATION TECHNIQUE

Virtualization techniques continue to evolve at rapid speed and have now come to find its application in embedded and mobile computing devices. Virtualization improves the utilization of system resources effectively and also enhances security by providing isolated environments to run untrusted applications. There are various approaches to virtualization of embedded systems, from among them. Virtual Mobile Infrastructure (VMI), a general framework that provides more reliable and secure solution for BYOD(Bring-Your-Own-Device), has therefore been proposed. The key of VMI is to host a mobile Operating System (OS) on a remote cloud data centre, and run hardware applications on it.

SOCIAL DISTANCING COVID-19

To limit the spread of an infectious disease, for instance, Covid-19 is to practice social distancing. This is not a new concept, as most societies have been aware of the value of keeping away from people who are suffering from an infection for many generations. The objective is to reduce transmission, delaying the epidemic peak, reducing the size of the epidemic peak, and spreading cases over a longer time to relieve pressure on the healthcare system. It is an action taken to minimize contact with other individuals. In the fight against the COVID-19, social distancing has proven to be a very effective measure to slow down the spread of the disease. People are asked to limit their interactions with each other, reducing the chances of the virus being spread with physical or close contact.

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