Dhanekula Institute Of Engineering & Technology

approved by AICTE, New Delhi, Accredited with NAAC'B' Grade

CSE
COMPUTER SCIENCE ENGINEERING

AICTE

B+ NAAC
ACCREDIATED WITH GRADE

Computer Science & Engineering

Tomorrow's World Through Today's Education

DEPARTMENT OF
Computer Science

NEWSLETTER ✉

NEWS LETTER

THE Leaflet

VOLUME 7 (2020-2021)

issue. 2 (AUG-SEPT)

Principal's Message

Dear Parents and Students,

It is with great pleasure that I welcome you to our College (DIET) Newsletter.

As Principal I am hugely impressed by the commitment of the college and the staff in providing an excellent all-round education for our students with our state of the art facilities. We as a team working together, strongly promote the zeal towards academic achievement among our students. The cultural, sporting and other successes of all our students and staff are also proudly celebrated together.

I congratulate the staff and students who brought latest technologies and concepts onto the day to day teaching learning platform. As long as our ideas are expressed and thoughts kindled we can be sure of learning, as everything begins with an idea.

I appreciate every student who shared the joy of participation in co-curricular and extracurricular activities along with their commitment to curriculum. That little extra we do, is the icing on the cake. 'Do more than belong – participate. Do more than care – help. Do more than believe – practice. Do more than be fair – be kind. Do more than forgive – forget. Do more than dream – work.'

With a long and rewarding history of achievement in education behind us, our DIET community continues to move forward together with confidence, pride and enthusiasm.
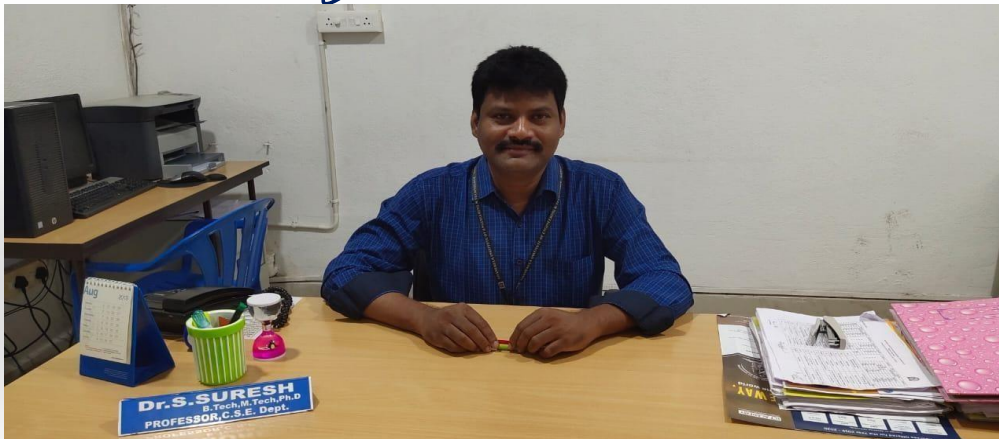
I hope you enjoy your visit to the website and should you wish to contact us, please find details at the www.diet.ac.in

Yours in Education

Dr.Ravi Kadiyala,

Principal

Message From HOD

Dr. S. Suresh Professor & HOD, Computer Science and Engineering

Greetings from the Department of CSE, Dhanekula Institute of Engineering & Technology, Vijayawada.!!!!

"It is a pleasure to be the head of the department of CSE. The department offers B-Tech (CSE) and M-Tech (CSE). The department has a team of highly experienced and motivated faculty members who are in process of tuning the young minds to make them globally competitive. The department is equipped with state-of-the-art laboratories where students can enhance their knowledge and skill. The strength of the department is highly motivated students who understand the dynamics of the industry and upgrade their skills accordingly. The scope of computer science is endless. The students of the computer science and engineering are highly demanded by the recruiters of the top companies. Depending upon the interest of the student, he/she may choose to go for higher studies or if employed can choose to do research, development, design, production, application, testing or management in the Information Technology industry. In our department we not only give emphasis on study but also apply our knowledge in understanding what computers are, how to efficiently program them, different tools and technologies, the interface between the computer and the user, the computer graphics, computer networking, managing the database, software engineering and testing them efficiently and more. Through innovative teaching-learning process a teamwork approach and leadership building experience, our students gain vital communication and critical-thinking skills. Our institution provides a platform for the students to enhance their employability skills through Industry Institute Collaboration."

Department Vision:

To empower students of Computer Science and Engineering Department to be technologically adept, innovative, global citizens possessing human values.

Department Mission:

To Encourage students to become self-motivated and problem solving individual To prepare students for professional career with academic excellence and leadership skills. To Empower the rural youth with computer education. To Create Centre's of excellence in Computer Science and Engineer

Department PEO's:

PEO1: Excel in Professional career through knowledge in mathematics and   engineering principles.

PEO2: Able to pursue higher education and research.

PEO3: Communicate effectively, recognize, and incorporate societal needs in their professional endeavors.

PEO4: Adapt to technological advancements by continuous learning.

STUDENT ACTIVITIES:

Most of the students were actively participated in the learning activities in doing internships completed and received certificates during the lockdown period.

Department of Computer Science & Engineering
A.Y:2019-20
LIST OF STUDENTS ON INTERSHIP

S. No	Year -Sec	Roll No	Industry	Area of work	From-To	No of days	Skills Acquired
1	III -A	178T1A0501	Deloitte	Cloud Computing	25-07-20 to 6-08-20	10	Client Discovery, Mobilization
2	III -A	178T1A0513	Deloitte	Cloud Computing	25-07-20 to 6-08-20	10	Client Discovery, Mobilization
3	III -A	178T1A0534	Deloitte	Cloud Computing	25-07-20 to 6-08-20	10	Client Discovery, Mobilization
4	III -A	178T1A0501	KPMG	Software Architecture	25-07-20 to 5-08-20	10	Insights & presentations
5	III -A	178T1A0503	KPMG	Software Architecture	25-07-20 to 5-08-20	10	Insights & presentations
6	III -A	178T1A0513	KPMG	Software Architecture	25-07-20 to 5-08-20	10	Insights & presentations
7	III -A	178T1A0534	KPMG	Software Architecture	25-07-20 to 5-08-20	10	Insights & presentations
8	III -A	178T1A0541	KPMG	Software Architecture	25-07-20 to 5-08-20	10	Insights & presentations

NSS ACTIVITIES:

DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY
NSS CELL
EVENT REPORT

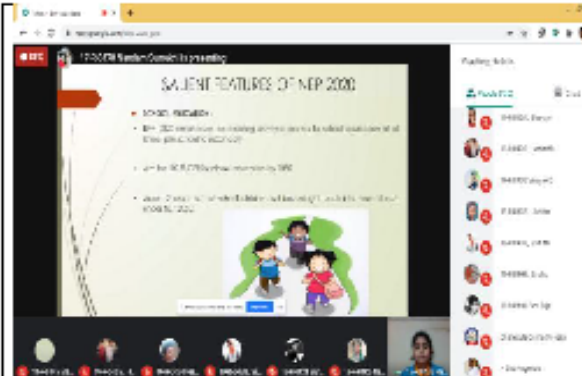| Date	22-09-2020
Event Name	Webinar on "Creating Awareness on NEP 2020"
Venue	Online (Google Meet)
Participants	1014

DESCRIPTION

As the Ministry of Education, Government of India has recently announced a New Education Policy (NEP) 2020, the college NSS Unit by instructions from the government of India has organized a Webinar on "Creating Awareness on NEP 2020" within the Institution.

The webinar has been organized individually by the various departments with the help of student NSS volunteers. The volunteers have prepared presentations and have explained the various salient features of NEP 2020 in detail to the students and staff of the department. The volunteers have emphasized on the various drawbacks of the previous education policy and how the new education policy is able to overcome them and providing all round holistic personality development of each individual in the learning process.
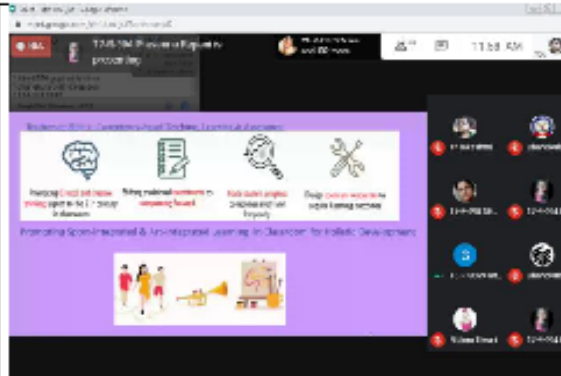
Approximately 1014 total number of students and staff have participated in and around 07 Webinars conducted within the institution and learned about the positive outcomes of the NEP 2020. All the students and staff expressed their strong belief on NEP 2020 in building a better future for the further generations.

Event PICS with Description

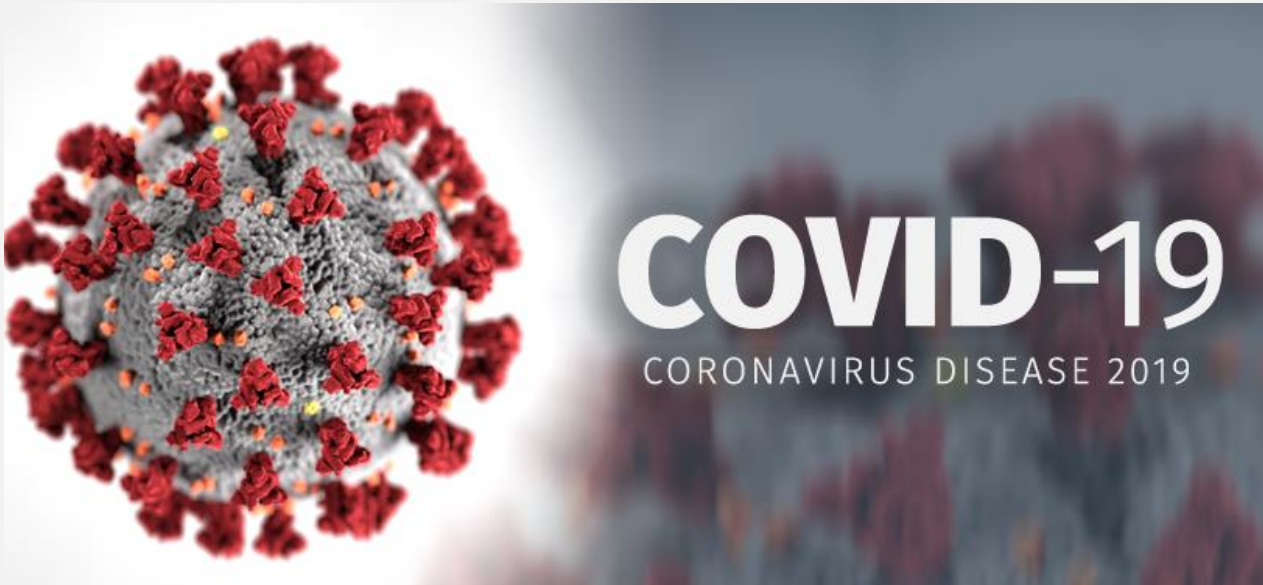| Student Volunteer explaining the Salient Features of NEP 2020 in primary and higher education.	Student Volunteer explaining about Competency based teaching, learning and assessment.

NSS PO   PRINCIPAL

STUDENT ARTICLES:

ARTICLE ON COVID -19

What is a CoronaVirus ?
Coronaviruses are a large family of viruses which may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes coronavirus disease COVID-19.

What is COVID-19 ?
COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. COVID-19 is now a pandemic affecting many countries globally.

What are the symptoms of COVID-19?
The most common symptoms of COVID-19 are fever, dry cough, and tiredness. Other symptoms that are less common and may affect some patients include aches and pains, nasal congestion, headache, conjunctivitis, sore throat, diarrhea, loss of taste or smell or a rash on skin or discoloration of fingers or toes. These symptoms are usually mild and begin gradually. Some people become infected but only have very mild symptoms.

Most people (about 80%) recover from the disease without needing hospital treatment. Around 1 out of every 5 people who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people, and those with underlying medical problems like high blood pressure, heart and lung problems, diabetes, or cancer, are at higher risk of developing serious illness.

How does COVID-19 spread?
 The disease spreads primarily from person to person through small droplets from the nose or mouth, which are expelled when a person with COVID-19 coughs, sneezes, or speaks. These droplets are relatively heavy, do not travel far and quickly sink to the ground. People can catch COVID-19 if they breathe in these droplets from a person infected with the virus. This is why it is important to stay at least 1 meter) away from others. These droplets can land on objects and surfaces around the person such as tables, doorknobs and handrails. People can become infected-by touching these objects or surfaces, then touching their eyes, nose or mouth. This is why it is important to wash your hands regularly with soap and water or clean with alcohol-based hand rub.

What is the difference between Self -Isolation,Self-Quarantine and Distancing ?
Quarantine means restricting activities or separating people who are not ill themselves but may have been exposed to COVID-19. The goal is to prevent spread of the disease at the time when people just develop symptoms.

Isolation means separating people who are ill with symptoms of COVID-19 and may be infectious to prevent the spread of the disease.

Physical distancing means being physically apart. WHO recommends keeping at least 1-metre distance from others. This is a general measure that everyone should take even if they are well with no known exposure to COVID-19.

What can we do to protect ourselves and prevent the spread of disease?

- Regularly and thoroughly clean your hands with an alcohol-based hand rub or wash them with soap and water. Why? Washing your hands with soap and water or using alcohol-based hand rub kills viruses that may be on your hands.
- Maintain at least 1 metre distance between yourself and others. Why? When someone coughs, sneezes, or speaks they spray small liquid droplets from their nose or mouth which may contain virus. If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person has the disease.
- Avoid going to crowded places. Why? Where people come together in crowds, you are more likely to come into close contact with someone that has COVID-19 and it is more difficult to maintain physical distance of 1 metre.
- Avoid touching eyes, nose and mouth. Why? Hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to your eyes, nose or mouth. From there, the virus can enter your body and infect you.
- Make sure you, and the people around you, follow good respiratory hygiene. This means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately and wash your hands. Why? Droplets spread virus. By following good respiratory hygiene, you protect the people around you from viruses such as cold, flu and COVID-19.
- Stay home and self-isolate even with minor symptoms such as cough, headache, mild fever, until you recover. Have someone bring you supplies. If you need to leave your house, wear a mask to avoid infecting others. Why? Avoiding contact with others will protect them from possible COVID-19 and other viruses.
- If you have a fever, cough and difficulty breathing, seek medical attention, but call by telephone in advance if possible and follow the directions of your local health authority. Why? National and local authorities will have the most up to date information on the situation in your area. Calling in advance will allow your health care provider to quickly direct you to the right health facility. This will also protect you and help prevent spread of viruses and other infections.
- Keep up to date on the latest information from trusted sources, such as WHO or your local and national health authorities. Why? Local and national authorities are best placed to advise on what people in your area should be doing to protect themselves.
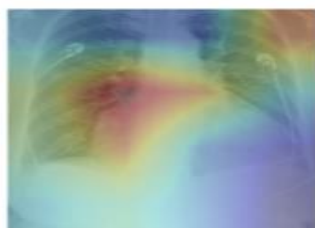

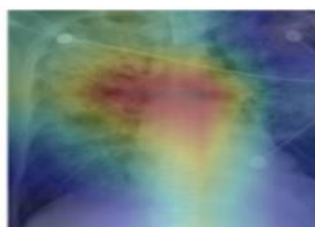**M. Mohanthy Rajveer**

178T1A0556

IV CSE

Anticipating heart failure with machine learning

A group led by researchers at CSAIL has developed a machine learning model that can look at an X-ray to quantify how severe the edema is, on a four-level scale ranging from 0 (healthy) to 3 (very, very bad).Every year, roughly one out of eight U.S. deaths is caused at least in part by heart failure. One of acute heart failure's most common warning signs is excess fluid in the lungs, a condition known as "pulmonary edema." A patient's exact level of excess fluid often dictates the doctor's course of action, but making such determinations is difficult and requires clinicians to rely on subtle features in X-rays that sometimes lead to inconsistent diagnoses and treatment plans. "This project is meant to augment doctors' workflow by providing additional information that can be used to

inform their diagnoses as well as enable retrospective analyses,"

 "By learning the association between images and their corresponding reports, the method has the potential for a new way of automatic report generation from the detection of image-driven findings," ."Of course, further experiments would have to be done for this to be broadly applicable to other findings and their fine-grained descriptors." focused on helping the system make sense of the text of the reports, which could often be as short as a sentence or two. Different radiologists write with varying tones and use a range of terminology, so the researchers had to develop a set of linguistic rules and substitutions to ensure that data could be analyzed consistently across reports. This was in addition to the technical challenge of designing a model that can jointly train the image and text representations in a meaningful manner. this model can turn both images and text into compact numerical abstractions from which an interpretation can be derived".We trained it to minimize the difference between the representations of the X-ray images and the text of the radiology reports, using the reports to improve the image interpretation." it is hopeful that future work in this area will provide more detailed lower-level image-text correlations, so that clinicians can build a taxonomy of images, reports, disease labels and relevant correlated regions.

M.DAYA RANI
 178T1A0547
IV CSE

Develop Software To Help Forecast Space Storms
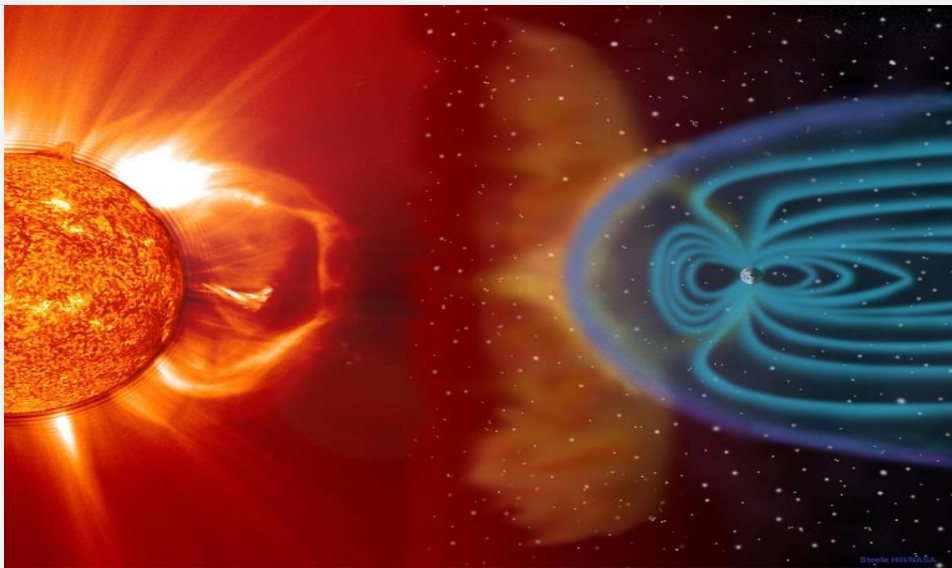
Power grid failures, massive blackouts, widespread damage to the satellites that enable GPS and telecommunication — space plasma phenomena like coronal mass ejections cause geomagnetic storms that interact with Earth's atmosphere, wreaking havoc on the systems and technologies that enable modern society.

On a moonless night on Aug. 28, 1859, the sky began to bleed. The phenomenon behind the northern lights had gone global: an aurora stretching luminous, rainbow fingers across time zones and continents illuminated the night sky with an undulating backdrop of crimson. From New England to Australia, people stood in the streets looking up with admiration, inspiration, and fear as the night sky shimmered in Technicolor. But the beautiful display came with a cost. The global telegraph system — which at the time was responsible for nearly all long-distance communication — experienced widespread disruption. Some telegraph operators experienced electric shocks while sending and receiving messages; others witnessed sparks flying from cable pylons. Telegraph

transmissions were halted for days.

The aurora and the damage that followed were later attributed to a geomagnetic storm caused by a series of coronal mass ejections (CMEs) that burst from the sun's surface, raced across the solar system, and barraged our atmosphere with magnetic solar energy, wreaking havoc on the electricity that powered the telegraph system. Although we no longer rely on the global telegraph system to stay connected around the world, experiencing a geomagnetic storm on a similar scale in today's world would still be catastrophic. Such a storm could cause worldwide blackouts, massive network failures, and widespread damage to the satellites that enable GPS and telecommunication — not to mention the potential threat to human health from increased levels of radiation. Unlike storms on Earth, solar storms' arrival and intensity can be difficult to predict. Without a better understanding of space weather, we might not even see the next great solar storm coming until it's too late.

K.Gopi Mani

178T1A0544
 IV CSE

USAGE OF GITHUB WITH GITBASH

GitHub, Inc. is an American multinational corporation that provides hosting for software
development and version control using Git.GitHub is one of the most popular and well-known technology.
The GitHub service was developed by Chris Wanstrath, P. J. Hyett, Tom Preston-Werner and Scott Chacon
using Ruby on Rails, and started in February 2008. The company, GitHub, Inc., has existed since 2007 and is
located in San Francisco.
Usage:
GitHub is service we can access with free of cost.After creating an account in github.com
When we open our account we observe that every account is associated with a unique
GitHub handle.
 Wiith this GitHub handle and password we can access our GitHub account.
Modes of accessing:
Here we have 2 modes to access github
1.by using gitBash
2.by using gitHub desktop
Commands to be used with gitbash:
1.*mkdi*r:To create a folder which is used for saving our files.($ mkdir Demo)
2.**add**:to add a file to our github account.($ git add filename.extention)file name should consist of extention
also.
3.**commit**:here we are adding the information about the file,or when it is created ,or any changes modified or
any type of information in words in quotes.($ git commit "this file contains source code")
4.**push**:finally we are modifying the content to our account by using this command($ git push –u origin master)
-u is optional one -,you can use it or don't use
5.**fork**:This command is one of the most frequently and widely useful one.
If you want the source code of someone else content by using the fork command we can add to our account.
6.**clone**:if you want create a dummy repository in our local systems like our pc,laptops .($ git clone hashcode)
hashcode means when we create a repository in github it assign a unique code for that(if you observe a button
like code after click you will find a hashcode for the repository)
summary

1.In github it is to create a repository for that we have to click on our (*profile logo->your repositories->NEW->place your repository name->submit*).it as simple as possible if you want your repository not be empty then click checkbox like add Readme)

2 we can also delete a repository

Advantages:

1.GitHub offers its basic services free of charge

2. Free GitHub accounts are commonly used to host open-source projects.

3.it can be accessed from anywhere just like our gmail account.

178T1A0543
(K.RAJA SEKHAR)

IVCSE

Artificial Neural Network

BACKGROUND :

Many task which seem simple for us, such as reading a handwritten note or recognizing a face, are difficult task for even the most advanced computer. In an effort to increase the computer ability to perform such task, programmers began designing software to act more like the human brain, with its neurons and synaptic connections. Thus the field **of "Artificial neural network"** came into existence.

Where can neural network systems help?

• where we can't formulate an algorithmic solution.

• where we can get lots of examples of the behaviour we require.

• where we need to pick out the structure from existing data.

What is a neural network?

Neural Networks are a different paradigm for computing:

• Von Neumann machines are based on the processing/memory abstraction of human information processing.

• Neural networks are based on the parallel architecture of animal brain

Artificial neural network (ANNs) are programs designed to solve any problem by trying to mimic structure and function of our nervous system. Neural network are based on simulated neurons. Which are joined together in a variety of ways to form networks. Neural network resembles the human brain in the following two ways: -A neural network acquires knowledge through learning.A neural network's knowledge is stored with in the interconnection strengths known as synaptic weight. Neural network are typically organized in layers. Layers are made up of a number of interconnected 'nodes', which contain an 'activation function'. Patterns are presented to the network via the 'input layer', which communicates to one or more 'hidden layers' where the actual processing is done via a system of weighted 'connections'. The hidden layers then link to an 'output layer' where the answer is output.

Hidden Layers

Connections

Input layer   Output layer
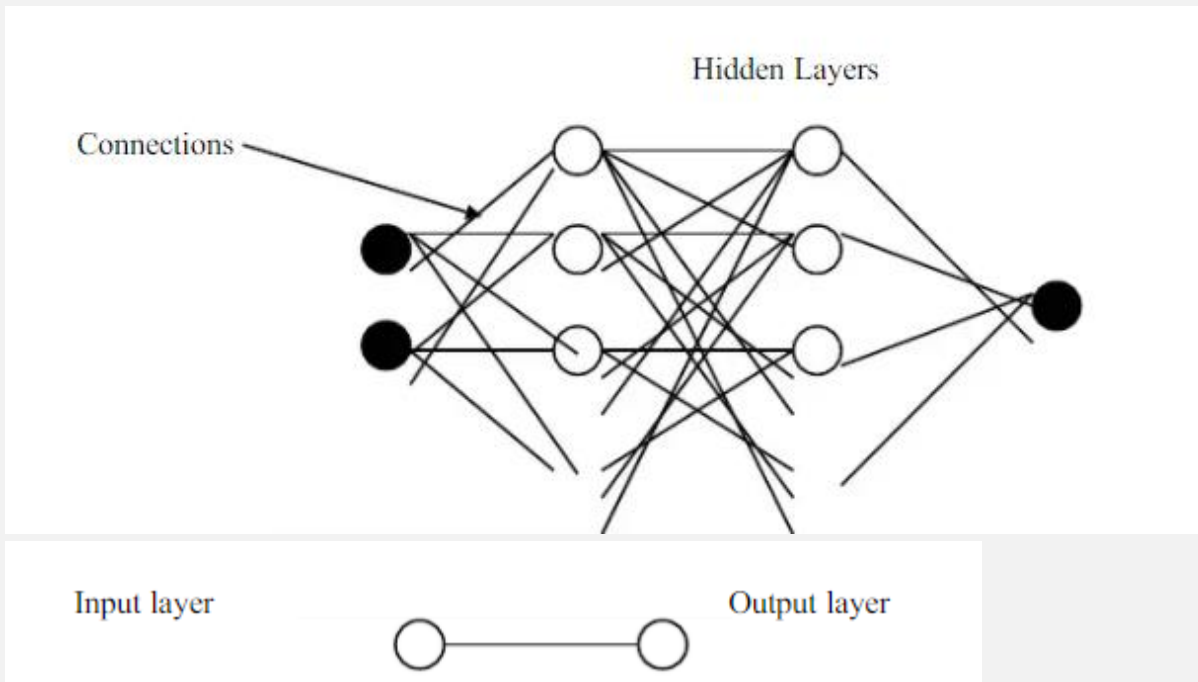
Basic structure of neural network

Each layer of neural makes independent computation on data that it receives and passes the result to the next layers(s). The next layer may in turn make independent computation and pass data further or it may end the computation and give the output of the overall computation .The first layer is the input layer and the last one, the output layer. The layers that are placed within these two are the middle or hidden layers..A neural network is a system that emulates the cognitive abilities of the brain by establishing recognition of particular inputs and producing the appropriateoutput. Neural networks are not "hard-wired" in particular way; they are trained using presented inputs to establish their own internal weights and relationships guided byfeedback. Neural networks are free to form their own internal working and adapt on their own.
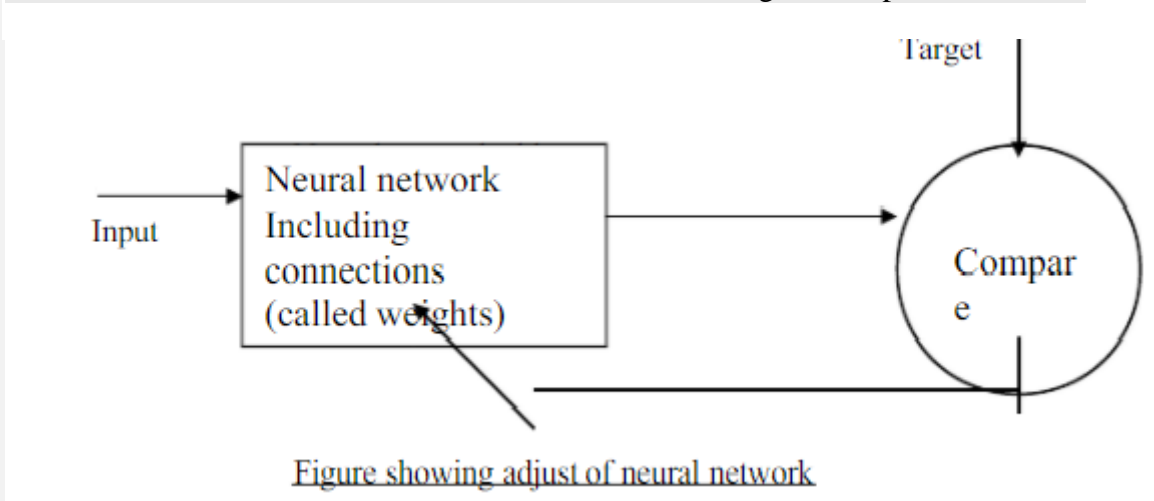

Figure showing adjust of neural network

APPPLICATIONS :

Aerospace

• High performance aircraft autopilot, flight path simulation, aircraft control systems, autopilot enhancements, aircraft component simulation, aircraft component fault detection

.•.Automobile control Automobile automatic guidance system, warranty activity analysis

.Banking

• Check and other document reading credit application evaluation.Credit card activity checking

• Neural networks are used to spot unusual credit card activity thatmight possibly be associated with loss of a credit card.

Defense

• Weapon steering, target tracking, object discrimination, facial recognition, new kinds of sensors, sonar, radar and image signal processing including data compression, feature extraction and noise suppression, signal/

image identification

.Electronics

• Code sequence prediction, integrated circuit chip laying, process control, chip failure analysis, machine vision voice synthesis, nonlinear modeling.

Entertainment

• Animation, special effects, market forecasting.

Financial

• Real estate appraisals, loan advisor, mortgage screening, corporate bond rating, credit-line use analysis, and portfolio trading program ,corporate financial analysis, and currency price prediction.

Industrial

• Neural networks are being trained to predict the output gasses of furnaces and other industrial process. They then replace complexand costly equipment used for this purpose in the past

.Insurance

• Neural networks are used in policy application evaluation, product optimization.

Manufacturing

• Neural networks are used in manufacturing process control, product design and analysis, process and machine diagnosis, real-time particle identification, visual quality analysis, paper quality prediction, computer – chip quality analysis, analysis of grinding operations, chemical product design analysis, machine maintenance analysis, project bidding, planning and management,dynamic modeling of chemical process system

.Medical

Neural networks are used in breast cancer cell analysis, EEG and ECG analysis, prosthesis design, optimization of transplant times, hospital expense reduction, hospital quality improvement, andemergency room test advisement.Oil and Gas

• Neural networks are used in exploration of oil and gas.

Artificial Neural Network • Neural networks are used in trajectory control, forklift robot, manipulator controllers, vision systems.

Other application• Artificial intelligence

• Character recognition

• Image understanding

• Logistics

• Optimization

• Quality Control

• Visualization

Advantages: --

1.It involve human like thinking.

2.They handle noisy or missing data.

3.They create their own relationship amongst information – no equations!

4.They can work with large number of variables or parameters.

5.System has got property of continuous learning.

6. They deal with the non-linearity in the world in which we live.

Disadvantage – 1. In learning process time required may be in several months or years.

2. It is hard to implement.

Conclusion – In this present world of automation to automate systems neural network and fuzzy logic systems are required. Fuzzy logic deals with vagueness or uncertainty and neural network related to human like thinking.Artificial neural network, in the present scenario is novel in its technologica lfield and still we have to witness a large of its development in the upcoming era's whose speculations are not required, as it will speak for themselves.

M. MANI VENKATA SAI

(178T1A0559),IVCSE

Ethical Hacking

The explosive growth of the Internet has brought many good things: electronic commerce, easy access to vast stores of reference material, collaborative computing, e-mail, and new avenues for advertising and information distribution, to name a few. As with most technological advances, there is also a dark side: criminal hackers. Governments, companies, and private citizens around the world are anxious to be a part of this revolution, but they are afraid that some hacker will break into their Web server and replace their logo with pornography, read their e-mail, steal their credit card number from an on-line shopping site, or implant software that will secretly transmit their organization's secrets to the open Internet. With these concerns and others, the ethical hacker can help.

This paper describes ethical hackers: their skills, their attitudes, and how they go about helping their customers find and plug up security holes.

The term "hacker" has a dual usage in the computer industry today.

What is ethical hacking?

With the growth of the Internet, computer security has become a major concern for businesses and governments. They want to be able to take advantage of the Internet for electronic commerce, advertising, information distribution and access, and other pursuits, but they are worried about the possibility of being "hacked." At the same time, the potential customers of these services are worried about maintaining control of personal information that varies from credit card numbers to social security numbers and home addresses.

In their search for a way to approach the problem, organizations came to realize that one of the best ways to evaluate the intruder threat to their interests would be to have independent computer security professionals attempt to break into their computer systems. This scheme is similar to having independent auditors come into an organization to verify its bookkeeping records. In the case of computer security, these "tiger teams" or "ethical hackers" 3 would employ the same tools and techniques as the intruders, but they would neither damage the target systems nor steal information. Instead, they would evaluate the target systems' security and report back to the owners with the vulnerabilities they found and instructions for how to remedy them.

Who are ethical hackers?

Ethical hackers typically have very strong programming and computer networking skills and have been in the computer and networking business for several years.

They are also adept at installing and maintaining systems that use the more popular operating systems used on target systems.

These base skills are augmented with detailed knowledge of the hardware and software provided by the more popular computer and networking hardware vendors. It should be noted that an additional specialization in security is not always necessary, as strong skills in the other areas imply a very good understanding of how the security on various systems is maintained. These systems management skills are necessary for the actual vulneries, the work that ethical hackers do demands a lot of time and persistence. This is a critical trait, since criminal hackers are known to be extremely patient and willing to monitor systems for days or weeks while waiting for an opportunity. A typical evaluation may require several days of tedious work that is difficult to automate. Some portions of the evaluations must be done outside of normal working hours to avoid interfering with production at "live" targets or to simulate the timing of a real attack. When they encounter a system with

which they are unfamiliar, ethical hackers will spend the time to learn about the system and try to find its weaknesses. Finally, keeping up with the ever-changing world of computer and network security requires continuous education and review.

What do ethical hackers do?
An ethical hacker's evaluation of a system's security seeks answers to three basic questions:
- What can an intruder see on the target systems?
- What can an intruder do with that information?
- Does anyone at the target notice the intruder's attempts or successes?

Figure 1   Library of Congress Web page before attack

Figure 2　Hacked Library of Congress Web page

The final report

The final report is a collection of all of the ethical hacker's discoveries made during the evaluation. Vulnerabilities that were found to exist are explained and avoidance procedures specified. If the ethical hacker's activities were noticed at all, the response of the client's staff is described and suggestions for improvements are made. If social engineering testing exposed problems, advice is offered on how to raise awareness. This is the main point of the whole exercise: it does clients no good just to tell them that they have problems. The report must include specific advice on how to close the vulnerabilities and keep them closed. The actual techniques employed by the testers are never revealed. This is because the person delivering the report can never be sure just who will have access to that report once it is in the client's hands

Conclusions

The idea of testing the security of a system by trying to break into it is not new. Whether an automobile company is crash-testing cars, or an individual is testing his or her skill at martial arts by sparring with a partner, evaluation by testing under attack from a real adversary is widely accepted as prudent. It is, however, not sufficient by itself

From a practical standpoint the security problem will remain as long as manufacturers remain committed to current system architectures, produced without a firm requirement for security. As long as there is support for ad hoc fixes and security packages for these inadequate designs and as long as the illusory results of penetration teams are accepted as demonstrations of a computer system security, proper security will not be a reality.

MANDAVA DEEKSHA
178T1A0550,IVCSE

FACULTY ARTICLES

This Is Me Who Cant Stop To Describe About This Beautiful Painting..
While Watching The Full Moon It Feels Like Moon Is Melting Into That Cool And Calm Deep Ocean Following The Stars Are Showing The Way To Enter And The Sky And Ocean Are In Blue Shades Because There Is Nothing More Beautiful Than The Way The Ocean Refuses To Stop Kissing The Shoreline, No Matter How Many Times Its Sent Away.
The Mind Is Like Water .When It's Turbulent, Its Difficult To See, When It's Clam, Everyting Becomes Clear. By Seeing The Floating Umberella It Looks Like That One Also Can't Wait To Meet That Beautiful Moon.That Floating Umberella Shade Looks Like A Floating Boat That Carries The Moon Into Ocean.
Who Else Wants To Shut Off Their Phone, Device To The Beach, Forget Everthing, And Just Listen To The Sound Of The Waves.
By Seeing This Time Doesn't Move Hour To Hour, But Mood To Moment.
By Seeing This It Inspires My Imagination And Brings Eternal Joy To The Soul.
by Y.Salini,Asst.Professor

Screenless Display

As the name implies it deals with the display of several things without the use of screens using projector.

It involves the following 3 different working principles. The Visual image, Virtual retinal display, Synaptic interface. This paper mainly illustrates and demonstrates how the screen less displays works and its applications in various fields of science. This technology would bring about the revolution in the field of displays and monitors that are costly, huge and are proven difficult to manage the power requirements and constraints . It is also the futuristic technological innovation.

Screenless display is the present evolving technology in the field of the computer-enhanced technologies. It is going to be the one of the greatest technological development in the coming future years [1]. Several patents are still working on this new emerging technology which can change the whole spectacular view of the

screenless displays. Screen less display technology has the main aim of displaying (or) transmitting the information without any help of the screen (or) the projector. Screen less displays have become a new rage of development for the next GEN-X. Screenless videos describe systems for transmitting visual information from a video source without the use of the screen

HOLOGRAM

Holograms were used mostly in telecommunications as an alternative to screens. Holograms could be transmitted directly, or they could be stored in various storage devices (such as holo discs) the storage device can be hooked up with a holo projector in order for the stored image to be accessed [1]. Fig.2. Example of visual Image Debatably, virtual reality goggles (which consist of two small screens but are nonetheless sufficiently different from traditional computer screens to be considered screen less) and heads-up display in jet fighters (which display images on the clear cockpit window) also are included in Visual Image category.

In all of these cases, light is reflected off some intermediate object (hologram, LCD panel, or cockpit window) before it reaches the retina. In the case of LCD panels the light is refracted from the back of the panel, but is nonetheless a reflected source[3]. The new software and hardware will enable the user to, in effect; make design adjustments in the system to fit his or her particular needs, capabilities, and preferences. They will enable the system to do such things as adjusting to users' behaviours in dealing with interactive movable type.

RETINAL DISPLAY

Virtual retinal display systems are a class of screen less displays in which images are projected directly onto the retina as shown in figure 3. They are distinguished from visual image systems because light is not reflected from some intermediate object onto the retina; it is instead projected directly onto the retina. Retinal Direct systems, once marketed, hold out the promise of extreme privacy when computing work is done in public places because most inquiring relies on viewing the same light as the person who is legitimately viewing the screen, and retinal direct systems send light only into the pupils of their intended viewer

THE WORKING PRINCIPLE

There are several new emerging ways for the technological development of the working principle of the screen less displays[4]. Several software's are merging for the GEN-X wonder view. Any computer system that can run the mudoc software can present text that has been set in interactive movable type. Most of the mudocs that are consumed in the next few years will be consumed with conventional personal computers, e-book readers, and other kinds of display and projection devices that are now in use. Very soon it appears to be a new kind of input/output system will facilitate communication and interaction between the computer and the computer user.

This new human/computer interface is the telereader terminal. Visual Image is a bitmap manipulation and composition product. Bitmaps can be manipulated independently, in the Image Mode or multiple bitmaps can be composited Together in the Object Mode to create a "collage". Visual Image can create and Manipulate images of any size: the only limitation is the amount of memory resources your system has

Creating Visual Catalog Files with Visual Image

Visual Image gives you the ability to create files in the EYE file format for use in the Visual Catalog program. These EYE files can be used to create catalogs of images in logical sub groupings: for example, you can create a catalog file in the EYE format that lists all images of building materials (brick, concrete, stone, etc.). The File, Export Project command creates an EYE file that refers to all of the images that are currently loaded into Visual Image. When you select this command, you are prompted to enter a filename for the EYE file that is to be created. If you have created any image in Visual Image that are not yet saved to disk you will be asked if you wish to include those images in the EYE file and if so, you are prompted to store those images as bitmaps.

The File, Exports Editor Command in Visual Image allows you to pack and choose those image files on disk that you wish to include in a catalog EYE file [5]. When you select File in Export Editor, a file browser appears from which you can choose the image files to include. Use this browser to select images to add to a project file for use in Visual Catalog

APPLICATIONS OF THE SCREENLESS DISPLAY

The main use of the screen less displays are used for the development of the mobile phones which are mainly used by the old and blind people as shown in figure 7. This type of the invention of the screen less displays was first done on the mobile phone named OWASYS 2CC. This model is very useful for the old, blind, and even for the people with less vision power.

Appliaction applied to mobile Tecnology Screen less displays technology is also implemented for the development of the screen less laptops. A laptop without an LCD can be a very useful portable solution when connected to CRT or fixed LCD monitors.

Laptops without screens would also be a green solution, giving value to donated CRT monitors that would otherwise be heading for landfills. Portability means that volunteers, who don't always have the time to travel to people's homes, can more easily maintain this computer. Screenless displays are also widely applicable in the field of the holograms projection.

Hologram projection is a result of a technological innovation that truly helps in touch less holographic interfaces. In fact, hologram projection projects 3D images of so high quality that it feels as if one can touch them. However, holographic projection is still to achieve mass acceptance as until now, conventional holograms, which offer 3D images.

Latest laser technology are also implementing the special technique of the screen less display through the presence of the several 3D scope animation or the screen provides the advantage of being combined with the Laser Valve Video Projector that helps in projecting video images by the use of the laser light instead of the Xenon Arc lamps as depicted in figure 8. Laser technologies have given an edge over the other technologies as the LVP gives the projector an excellent depth in the focus.

implemented in the emerging of the new screen less TV's. Imagine that watching the TV picture that seems to be magically appearing in the thin air. The picture just floats on in front of the viewer; this would be a latest emerging technology.

by P.Sunitha, Asst.Professor, cse dept

VIRTUAL SMART PHONE

For every leaving specie communication is a way by which they share/pass their thoughts/fillings to one another. We homosepians mainly use verbal communication to communicate with each other. In this Paper we introduce VSP, a Virtual Smart Phone which is basically a step to connect both the Physical and virtual world, by using a tiny projector, Camera, Speaker, mike & Cloud Computing Technology over the internet in the form of wearable device. In VSP all the required component are fabricated in the wearable device by which use communicate with the help of natural hand gesture, Hand movement and Internet. In VSP user communicate with each other by Virtual mobile phone with the help of touch gesture radio wave and cloud computing technology.

VSP will end the physical dependency of mobile phone. VSP provide novel interaction method to seamlessly communicate with each other in a fun and intuitive way. The user can touch their Palm to make call and can also be used for watching movies or Images on their Palm/wrist. Touch gesture is used for making and Terminating the call. VSP uses touch-based interactions as instruction for establishing communication between the different users.

INTRODUCTION:

The recent advent of novel sensing and display technologies has encouraged the development of a variety of multi-touch and gesture based interactive systems. In these systems user may interact directly with information using touch add natural hand gestures. Today there are lots of way by which we can connect to digital world in the controlled environment using muti-touch and gesture based interaction. Unfortunately, most gestural and multi-touch based interactive systems are not mobile and small mobile devices fail to provide the intuitive experience of full-sized gestural systems.

Moreover, information still resides on screens or dedicated projection surfaces. There is no link between our interaction with these digital devices and interaction with the physical world around us. In this paper, we present VSP-Virtual Smart Phone, a multi-touch and gesture based interaction system. Which replace the physical mobile phone device to the virtual multi-touch & natural gesture based interaction on the user palm by which user communicate with other digital devices over the network. VSP basically turns the human hand as a mobile phone by which is able to user connect to the digital world as well as other peoples like their friends and relatives.
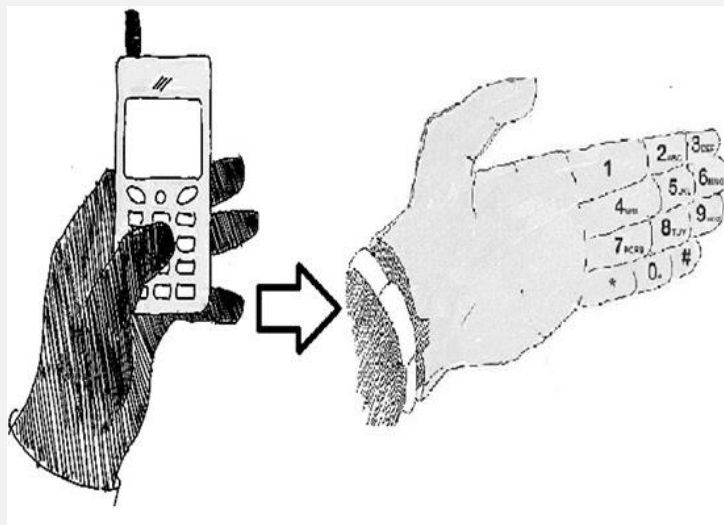
VSP is basically a computer-vision based wearable and gestural information interface that augments the physical world around us with digital information and proposes natural hand gestures as the mechanism to interact with that information.

RELATED WORK

Recently, there have been a great variety of multi-touch interaction and mobile device products or research prototypes that have made it possible to directly manipulate user interface components using touch and natural hand gestures. Most of these systems depend on the physical touch-based interaction between the user's fingers and physical screen and thus do not recognize and incorporate touch independent freehand gestures. VSP Virtual Smart Phone Technology takes a different approach to computing and tries to make the digital aspect of our lives more intuitive, interactive and, above all, more natural. It's a lot of complex technology squeezed into a simple portable device. When we bring in connectivity, we can get instant, relevant visual information projected on any object we pick up or interact with the technology is mainly based on hand augmented reality, gesture recognition, computer vision based algorithm etc.

Augmented Reality:

Augmented reality (AR) is a term for a live direct or indirect view of a physical real world environment whose elements are augmented by virtual computer-generated imagery. It is related to a more general concept called mediated reality in which a view of reality is modified (possibly even diminished rather than augmented) by a computer. The augmentation is conventionally in real-time and in semantic context with environmental elements.

Virtual Smart Phone uses Augmented Reality concept to superimpose digital information on the physical world. With the help of advanced AR technology (e.g. adding computer vision and object recognition) the information about the surrounding real world of the user becomes interactive and digitally usable. Artificial information about the environment and the objects in it can be stored and retrieved as an information layer on top of the real world view. The main hardware components for augmented reality are: display, tracking, input devices, and computer. Combination of powerful CPU, camera, accelerometers, GPS and solid state compass are often present in modern Smartphone, which make them prospective platforms.

Gesture Recognition

Gesture recognition is a topic in computer science and language technology with the goal of interpreting human gestures via mathematical algorithms. Gestures can originate from any bodily motion or state but commonly originate from the face or hand. Current focuses in the field include emotion recognition from the face and hand gesture recognition. Many approaches have been made using cameras and computer vision algorithms to interpret sign language. Gesture recognition can be seen as a way for computers to begin to understand human body language, thus building a richer bridge between machines and humans than primitive text user interfaces or even GUIs (graphical user interfaces), which still limit the majority of input to keyboard and mouse. Gesture recognition enables humans to interface with the machine (HMI) and interact naturally without any mechanical devices. Gestures can be used to communicate with a computer so we will be mostly concerned with empty handed semiotic gestures.

Computer vision based algorithm

Computer vision is the science and technology of machines that can see. As a scientific discipline, computer vision is concerned with the theory behind artificial systems that extract information from images. The image data can take many forms, such as video sequences, views from multiple cameras, or multi-dimensional data from a medical scanner. The software tracks the user's gestures using computervision based algorithms. The computer vision system for tracking and recognizing the hand postures that control the menus is based on a combination of multi-scale color feature detection, view based hierarchical hand models and particle filtering. The hand postures or states are represented in terms of hierarchies of multi-scale color image features at different scales, with qualitative interrelations in terms of scale, position and orientation. In each image, detection of multistage color features is performed.

The hand postures are then simultaneously detected and tracked using particle filtering, with an extension of layered sampling referred to as hierarchical layered sampling. To improve the performance of the system, a prior on skin color is included in the particle filtering. Figure 2: Gesture Recognized Mobile Keypad VSP is also related to augmented reality where digital information is superimposed on the user's view of a scene but it also differ in several significant ways. First VSP allows user to interact with the projected information using hand gestures. Second the information is projected onto the Hand/object and surfaces themselves, rather than onto glasses, goggles or watch which results in a very different user experience.

OBJECTIVE

VSP Invention is related to transfer of Data & establishing communication from one human body to other human body or from one human body to digital devices or vice-versa without any platform dependency. VSP is basically an attempts to make the communication between users and Digital devices more tangible and interactive. The objective of this invention is establishing the connection/communication between humans and also with digital devices by a touch gesture on the human Palm/Hand. VSP work on two type of data transfer.

First, It establish voice communication between the users with the help of GSM Technology without any physical cellular phone.

Second, For Transfer of Data between the humans and also with digital devices. It make use of the Internet, Intranet network or any other type of data Servers through which device and humans are connected to and the distinguish from one user to another by the authentication methods such as username/password, drawing a pattern on the virtual screen, face recognition, Palm recognition using palm lines or fingerprint detection can be used. In VSP voice communication form one human to another can be done either by using GSM or Internet/Intranet technology.

The Transferring of data from one human being to another or device using VSP. The first and second digital devices may be gesture recognition VSP system connected to a network including a data storage cloud and both uses VSP Technology.

WORKING

Working of VSP consist of 5 Main steps i.e. Enabling & Authenticate VSP, Make Call, Receive Call, Capture Image/Video, Copying Data & paste/Pass Data to other VSP & Digital Devices as follows.

A. Enabling VSP

The VSP is a wearable device and user has the key to Enable (ON)/Disable (OFF) the device through the Power Button. When user enable the VSP Device, an icon appears on the user palm or arm as per user as per selected by the user for showing the status (if a user has signed in).If not user can touch this icon to login or change users using different authentication methods like: Enter user name and password, Drawing a secret sign or pattern, Face recognition, Picture selection and Fingerprint detection and Palm line Detection after a user has signed in successfully, VSP is now Ready for making and receive calls and other Operations.

B. Make Call

After Enabling VSP now user is able to make call and communicate with their relatives and other persons. To make call, Dial mobile number using virtual key or using Voice Recognition system. For establishing call between two users, VSP uses two method that are as follows.
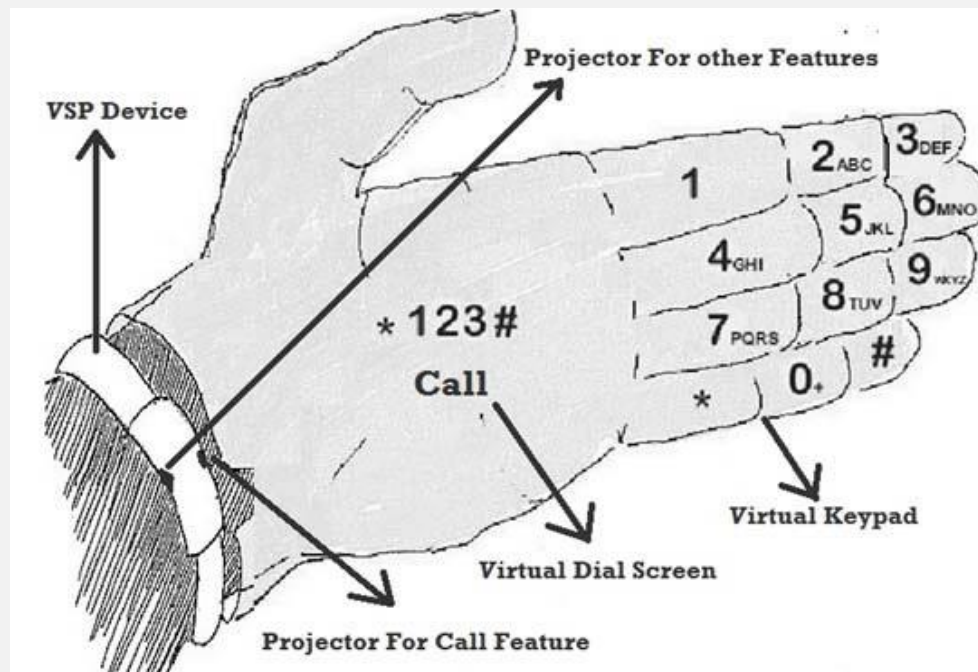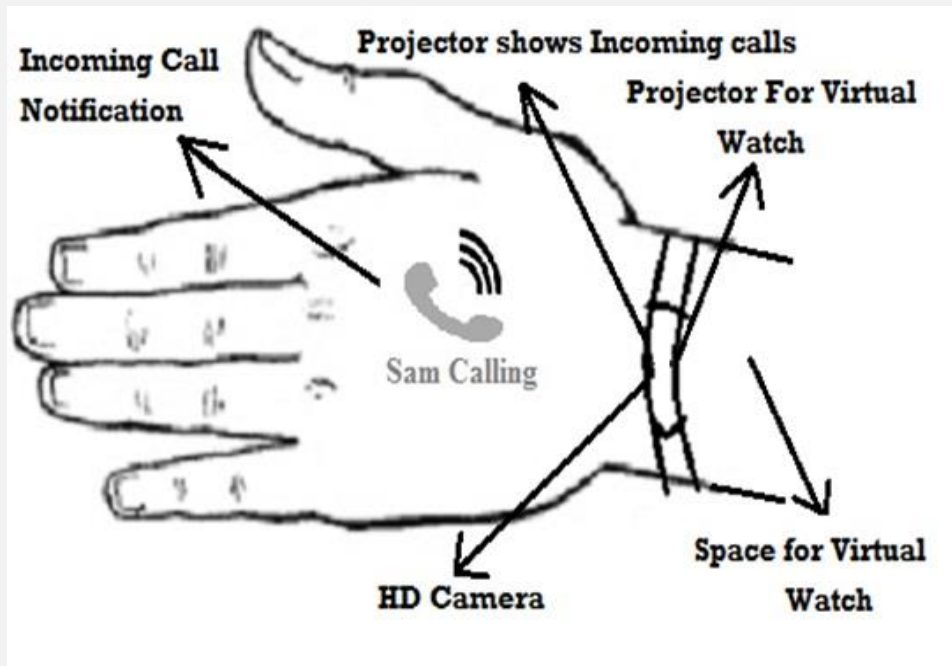

a. Make Call Using SIM:

VSP device has a micro SIM (Subscriber Identity Module) by which device established the call using GSM/CDMA (Global System for Mobile Communications / Code Division Multiple Access) Technology.

b. Make Call Using VOIP:

VSP device has a Wi-Fi (Wireless Fidelity) and Mobile Data option which connect the device to the Intranet/Internet, by using this user is able to make calls using VOIP (Voice Over IP) Technology. By using VOIP user is able to make the call to other VSP user as well as all the others GSM and Internet VOIP enable Digital Devices. When user is not connected to internet/Intranet, call is simply made using SIM without user's permission but when user connect to Internet it ask user to select the option by which user wanted to make call as per user selection the call is connect to other person.

Incoming Call Notification | **Projector shows Incoming calls** | **Projector For Virtual Watch**

Sam Calling

HD Camera | **Space for Virtual Watch**

C. Receive Call

When a VSP user called by other VSP user or other digital device users by (Physical Mobile phone laptop, Desktop and PDA 'Personal Data assistant) the notification of incoming call will be shown as per user selected Profile if user select vibrate mode, the small vibrator motor indicate incoming call by vibration & also shows the identity of calling user on back side of palm using high Density projector of VSP. If user select Sound Mode, incoming call notified by selected ring tone with user Name on the back side of Palm. In Silent mode it only indicate the name of caller in the back side of palm. For attending the incoming call user just touch, swipe the incoming call icon or other touch gesture selected by user. To speak the caller user either use Bluetooth Headset or wired headset which is connected to VSP device using 3.0 connector. User also is able to receive call directly using VSP Device Speaker and Mice. For VOIP calls both user must be connected to the internet using WI-FI or Mobile Data.

D. Capture Image/Video

VSP is also able to capture high Quality Images/Video using their high Quality Camera by click capture image button or by using gesture (make a fame using our index figure and thumbs) for taking photos. After taking the picture it shows the picture on user hand using VSP System. For shoot video with the same gesture user just required to change the camera mode photos to video. User also zoom in or zoom out while they capture Image/Video using their hand gesture.

E. Copy Data:

In VSP allow users to Transfer (Copy/Paste) Data from one human body to another human body or device by using a single touch gesture. For copy data user has to login First in VSP device and connected to Internet/Intranet. For identifying a copy event in VSP uses a long press (Detect by listener Program) on copy able data item (keeping finger on a data item more than 1.5 sec. shown on user arm using VSP projector) indicates to copy that data item. Whenever user Touch any copy able data a touch listener program start counting the time and when time exceeds the threshold (1.5 sec.) a message appears indicating that the data item is being copied and gets copied to the user's unique space in the data cloud. The copy Data to the data cloud can also be done by alternative ways (instead of long-press for 1.5 seconds). For example, double tap on data item or draw a circle around the data item to initiate copy. Using this process user copy multiple file for passing/paste to the other device all the copy data save in the cloud on temporary bases with unique id of each data item.

TECHNOLOGIES USED

VSP is basically a wearable device which is combination of hardware as well as software. In hardware VSP consist of Processor Unit, Ram & Rom Memory, Power supply (battery), Sensors (Accelerometer, 16 Proximity sensor for identifying touch on Arm), LED Indicator For Device Mode (ON/OFF), Micro Vibrator Motor, USB port (For charging or attaching other devices), 4 micro Projectors (like Pico Projectors), 1 HD

Camera for Capturing Images and videos, Low energy Required WI-FI and Bluetooth devices, GPS system, 4 touch buttons (ON/OFF Button, Snap Button, sound Up button, sound down button) and Nano SIM card slot. In software it use gesture recognition system, Touch based interaction system, Augmented Reality, computer vision based algorithm to fulfill all the objectives.

VSP uses the following Technology for Make Call, Receive Call, Copying Data & paste/Pass Data to other VSP & Digital Devices.

a. Voice Call:

In VSP voice call done by using either by using SIM (GSM/CDMA) or though Internet using VOIP Technology.

b. Data Transfer:

Data transfer from one body to another body or device in using VSP is done by using Data Cloud. For Accessing Data cloud user may be connected to Internet either by WI-FI or Mobile Data using SIM.

CONCLUSION:

VSP is basically a computer-vision based wearable and gestural interface that augments the physical world around us with digital information and proposes natural hand gestures as the mechanism to interact with that information. It connect Physical world to Virtual world. VSP give intuitive way to communicate and Data Transfer between different users as well as different Digital Devices.

VSP invention fulfill our two future requirements. First, it's free form physical dependencies of devices. Second, it connect our physical world to virtual world Some Application of VSP as Follows:

1. Used In Health Monitoring System.

2. Used to Find Information of any Product/Item.

3. Used to Connect News and Weather Update.

4. Used to connect Different Devices Virtually.

5. Used in Education & Training system.

by Ch.Padmini,Asst.Prof

NEED TO REMEMBER

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