SEMESTER 7

DEPT. OF
COMPUTER
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2018

W I R E D. 2.1

#YES_WE_CODE_LIVES

An Ode to WIRED...

I would like to express my sincere congratulations to you on the latest edition of our department newsletter WIRED. I believe that it is a valuable effort to bring out the artistic as well as technical skills of our students. Many stunning talents are hidden inside each individual and it needs a proper platform to bring them out. The department newsletter has already been accepted as a proficient platform for showcasing the astounding skills of the students. Such platforms always demand effective teamwork of students and help to grow their sense of belonging and capableness. It is a space to share their knowledge, experiences, views and other technical and non-technical expertise with their peers. This is a great effort to unveil the potential of the students and to acknowledge their achievements. Along with many other ventures SCMS does to improve the quality of the students, this stands out as one of the most popular and beautiful ventures, motivating the students. Once again, I congratulate you and wish you all the very best for your journey ahead.

-Ms. Viji Gopal
Assistant professor
Dept. of CSE

NATURAL LANGUAGE PROCESSING

Natural language processing (NLP) is a subfield of computer science, information engineering, and artificial intelligence concerned with the interactions between computers and human (natural) languages, in particular how to program computers to process and analyze large amounts of natural language data.

The development of NLP applications is challenging because computers traditionally require humans to "speak" to them in a programming language that is precise, unambiguous and highly structured, or through a limited number of clearly enunciated voice commands. Human speech, however, is not always precise -- it is often ambiguous and the linguistic structure can depend on many complex variables, including slang, regional dialects and social context.

USES OF NLP

Most of the research being done on natural language processing revolves around search, especially enterprise search. The machine interprets the important elements of the human language sentence, such as those that might correspond to specific features in a data set, and returns an answer.NLP can be used to interpret free text and make it analyzable. There is a tremendous amount of information stored in free text files, like patients' medical records, for example. Prior to deep learning-based NLP models, this information was inaccessible to computer-assisted analysis and could not be analyzed in any kind of systematic way. Sentiment analysis is another primary use case for NLP. Using sentiment analysis, data scientists can assess comments on social media to see how their business's brand is performing, for example, or review notes from customer service teams.

-Chithramol S.S.

AUTHENTICITY OF DIGITAL IMAGES IN SOCIAL MEDIA

Millions of images are being uploaded to a large number of social networking websites and photo sharing portals every day. People are posting images of their social events, gatherings, vacations, graduation ceremonies etc. without any fear towards their privacy. These images not just includes them and their families, but other people on the network too, and tagging them on these social networking websites is an unwanted disclosure and privacy violations. Above all, these images not only reveal the personal relationships and attitudes of the uploader, but of other individuals in the images as well. Publicly visible images sometimes showed people in compromising situations without the consent or knowledge of individuals in those images. From security and privacy point of view. Most of the content sharing websites have a set of privacy settings for the user to manage, but, unfortunately, these privacy system settings are not just adequate, especially with images. The reason is mostly the amount of information that is being carried by an image, essentially because of the unknown fact that if the image is even authentic or processed using some of the image processing software. Images on the social networks, impose three major security characteristics: Confidentiality, Integrity and Authenticity.

Most of the existing tools are only able to establish the non-authenticity of the image. No investigation about the kind of alteration of the message conveyed by the medium is performed, not to mention the motivation of the tampering. Of course, the human factor can in many cases provide a correct interpretation of the detected forgery. Hence what is required is a joint effort of researchers in media semantics, visual perception and media security fields that might produce interesting results, not only from the strict forensic investigation point of view. The work is so far limited to detecting whether images have been generated from others.

– Aswathi N Kutty

DATA IN THE MODERN WORLD

It is mind boggling to know that 2.5 Quintilian bytes of data is produced every day in the internet and the world evolves in to a data centric economy, in the modern world the value of a company is even attached to the amount of data it process, the requirement and value of data scientist or analysts are increasing as the amount of data produced and collected far outgrows the processing resources and manpower available.The data created varies differently there are structured as well as unstructured data structured these include datas like customer data, business data, transaction data ,scientific data and other geographic and security related datas collected ,world wide its interesting to know that one of the most exciting research in physics conducted at the large hydron collider in cern produce one petabyte of data per second but such quantities cannot be processed by existing computation system and the data is filtered to the most relevant for analysis purposes , in June 2017 the amount of data produced accounts for 200 petabytes in its tape libraries the computational power required to produces, construct and process these gigantic amount of data is enormous .

CERN does not have the computing or financial resources to crunch all of the data on site, so in 2002 it turned to grid computing to share the burden with computer centres around the world, the data plays a major role in many industries such as defense, finance and many others, companies such as amazon, Facebook and google collects data about their users in order to improve business, in order to do this companies offers free services to users which in turn produce more data which then can be used to improve services which attract more users, it is only recently that companies understood that the data collected by such companies can be turned to several AI services, the leading companies are now entering the scenario with big investments. The data industry is growing in an unprecedented phase and will continue to do so in the coming years, it is diverse in many ways interesting as it is complex,and it is most expected that the way we percieve data is going to be revolutionized in ways never expected .

-Arjun

JULIA

The dynamic programming language, which is free and open source, combines the speed and popular features of the best scientific and technical software.After years of tinkering, the dynamic programming language Julia 1.0 was officially released to the public during JuliaCon an annual conference of Julia users held recently in London.The release of Julia 1.0 is a huge Julia milestone since MIT Professor Alan Edelman, Jeff Bezanson, Stefan Karpinski, and Viral Shah released Julia to developers in 2012.

Julia has been revolutionizing scientific and technical computing since 2009. The creators started working on a new language that combined the best features of Ruby, MatLab, C, Python, R, and others. Julia, which was developed and incubated at MIT, is free and open source, with more than 700 active open source contributors, 1,900 registered packages, 41,000 GitHub stars, 2 million downloads, and a reported 101 percent annual rate of download growth. It is used at more than 700 universities and research institutions and by companies such as Aviva, BlackRock, Capital One, and Netflix.

Julia is also used by MIT Lincoln Laboratory and the Federal Aviation Administration to develop the Next-Generation Airborne Collision Avoidance System (ACAS-X), by the MIT Operations Research Center to optimize school bus routing for Boston Public Schools, and by the MIT Robot Locomotion Group for robot navigation and movement.Julia is the only high-level dynamic programming language in the "petaflop club," having achieved 1.5 petaflop/s using 1.3 million threads, 650,000 cores and 9,300 Knights Landing (KNL) nodes to catalogue 188 million stars, galaxies, and other astronomical objects in 14.6 minutes on the world's sixth-most powerful supercomputer.Julia is also used to power self-driving cars and 3-D printers, as well as applications in precision medicine, augmented reality, genomics, machine learning, and risk management.The release of Julia 1.0 signals that Julia is now ready to change the technical world by combining the high-level productivity and ease of use of Python and R with the lightning-fast speed of C++.

-Athira S Menon

WEB PHISHING

Phishing is the fraudulent attempt to obtain sensitive information such as usernames, passwords and credit card details, often for malicious reasons, by disguising as a trustworthy entity in an electronic communication.Phishing is typically carried out by email spoofing or instant messaging,and it often directs users to enter personal information at a fake website, the look and feel of which are identical to the legitimate site, the only difference being the URL of the website in concern.Communications purporting to be from social web sites, auction sites, banks, online payment processors or IT administrators are often used to lure victims. Phishing emails may contain links to websites that distribute malware.Phishing is an example of social engineering techniques used to deceive users, and exploits weaknesses in current web security. Attempts to deal with the growing number of reported phishing incidents include legislation, user training, public awareness, and technical security measures.

Phishing scams may direct you to a legitimate website and then use a pop-up to gain your account information. Give a fake password. If you not sure if a site is authentic, don't use your real password to sign in. If you enter a fake password and appear to be signed in, you're likely on a phishing site.Moreover, phishing is often used to gain a foothold in corporate or governmental networks as a part of a larger attack, such as an advanced persistent threat (APT) event. In this latter scenario, employees are compromised in order to bypass security perimeters, distribute malware inside a closed environment, or gain privileged access to secured data.

Your best defense: User awareness. Technological defenses can only take you so far in protecting an organization's users against phishing attacks. Your best defense lies in user awareness: teaching your users how to identify an email attack can go a long way in securing your organization.

-Harita Ranjith

GOSSIP

-Joselin persis Thomas

What of the news we got
Through local grapevine "reliable" as ever
The tale of someone's misfortune
Which tasted revoltingly   sweet
That we savored till it lasted
Swishing and swirling around our mouth
adding few touches with tongue our own
Creating finer turns than a playwright could
And spat as colorful blobs
Everywhere we went into waiting ears
All of us want truths, the right stories
To judge and whisper
behind our unwashed gloved hands

But none appreciate these truths
When it's gunpoint is turned towards you.

REINVENTING THE LIBRARY

Reinventing libraries so as to equip them to provide for the needs of the era,is not just about digitizing and automating library transactions.Reading has lost its charm as an entertainment after the coming of various other means of entertainment.Recently, I listened to a ted talk ,titled-"How to design a library that makes kids want to read" by Michael Beirut.The speech set me thinking about various ways in which we can make the libraries more interesting and relevant in today's world.For many of us libraries are just dull and boring rooms meant for nerds and book worms.But I think this notion should change.Libraries should become the activity hubs of villages and towns.

One of the most cherished memories of my childhood is the memory of my grandma telling me stories and folklores.This is something that today's children miss out on,due to the nuclear family systems.Libraries can provide an area for the toddlers and KG students where they will be narrated stories to.Retired school teachers and such caring people should be invited to volunteer the story telling process.This will a boon for both the children and the lonely old people.

Many movies that are based on books have been made.And movies do have more appeal and influence among children.Displaying these movies in audio-visual rooms of libraries would lure many children to read the books on which the movies are based.Using such subtle but powerful methods we can successfully inculcate the habit of reading books in small children.This is important because the habits formed during childhood remain till death.

–Alina Job

SOLITUDE

–Donna Maria Spencer

"We are not alone!"
We acclaim, we proclaim
Womb to light
We are all born just the same.

"We are not alone!"
We acclaim, we proclaim.
Reaching out to others
Our thirst for love to tame.

"We are not alone!"
We acclaim, we proclaim
Only to refrain
Our bleeding hearts to blame.

"You are not alone!"
They acclaim, they proclaim
We live in their memories
As we return to our solitary graves.

THE WORLD OF WITCHCRAFT AND WIZARDRY

Harry Potter in the past couple year has been a growing phenomenon in the world of children's literature . J.K. Rowling's series of novels about a young wizard and his years at "Hogwarts School of Wizarding and Witchcraft," has become one of the most successful children's book series of all time.

Whether it is a fight for his life, winning a quidditch match, or just staying out of trouble, these novels are anything but boring. One of the biggest reasons why these books have been such a success, the author knows how to keep the story going at all times in order to maintain the readers attention. Another factor which I believe has led to the novels success is that while reading, the reader wishes that they could live in this fantasy world created by Rowling where life is anything but ordinary. The novels make the reader somewhat desire a life like the one led by the characters of the novels, like going to a school to learn wizarding, always having extraordinary things happen and just being at Hogwarts seems like an unequaled joy for some. These novels have the ability to rekindle the long lost imaginations of adults, and keep the imaginations of children strong.

The most anticipated scenes from Harry Potter were the rebirth of Lord Voldermort(Tom Riddle) in Harry Potter and Goblet of Fire, death of headmaster Professor Albus Percival Wulfric Brian Dumbledore in Harry Potter and the Half Blood Prince, and the much awaited final war of Death Eaters and Order of Phoenix.The books were transformed into a blockbuster series of eight films (the final book, some 750 pages long, was adapted into two films) released over 10 years, which grossed more than $7 billion worldwide. Together, the book and movie series spawned a huge amount of related merchandise, and in 2010 a theme park inspired by the franchise opened in the United States

-Anjana Nair

MULTIPLE IMPRESSIONS

-Asniya C.B.

Aditya Hari-

-Joyal Seejo

-Ayisha Jalal

-Deepak

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