



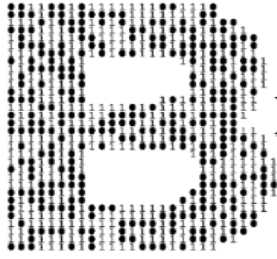
Vidya Vikas Education Trust's

Universal College of Engineering

Approved by AICTE, DTE, Maharashtra State Government and Affiliated to Mumbai University

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ITS



YTES

An Initiative By



Department of Information Technology

#Satyavachan

We all live under the same sky, but
we don't all have the same horizon.
~Konrad Adenauer

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DESIGNED BY:

**Ms. Aparna Sudhir
Ms. Mudra Doshi**

9 Security Mistakes That Should Stay In 2019

Cyber attacks are inevitable, regardless of the size of a business or the sector it operates in. Cyber criminals will try their luck with any business connected to the internet. As we stand in the last quarter of 2019, it's time for businesses to address 10 common security mistakes.

1. Assuming an attack won't happen

Any business could be attacked. It's important for businesses to prepare their IT estate for compromise, so in the event of an attack, they're able to limit the damage that can be done to their operations, finances and reputation.

2. Poor password management

Passwords aren't going away any time soon, but there are additional measures that can be taken to avoid them being compromised. Use strong, unique passwords and ensure all users do the same.

3. Inadequate backup

If the IT estate is compromised and data lost, can it be retrieved? Implement a rigorous backup regime to ensure business-critical data can be recovered if the business is attacked. Store this backed up data in multiple secure locations, including an 'offline' location where infected systems can't access it.

4. Reactive rather than proactive strategies

Some attacks bypass firewalls and anti-virus programmes, so businesses need to proactively hunt their systems for signs of compromise that haven't been picked up by these traditional methods.

5. Generic user privileges

Users should only be permitted access to the information they need to do their job. Limit the number of privileged user and admin accounts. The more users who have access to privileged information, the more targets there are for cyber criminals.

6. Poorly configured, out of date systems

Environments that are not configured securely can enable malicious users to obtain unauthorized access. It's therefore imperative to ensure the secure configuration of all systems at all times.

7. No remote working policy

If users in the business work on the move or from home, it's important to have policies in place that will protect any sensitive corporate or personal data in the event of a mobile device being lost, stolen or compromised.

8. Inconsistent monitoring

By not monitoring their systems, businesses could be overlooking opportunities that attackers won't miss. Continuously monitor all systems and networks to detect changes or activities that could lead to vulnerabilities.

9. Creating an incident response when it's too late

There is a simple answer for businesses that don't have an incident response plan: write one! Make it specific and ensure it accurately reflects the company's risk appetite, capabilities and business objectives.

Ref.: <https://www.informationsecuritybuzz.com/articles/10-security-mistakes-that-should-stay-in-2019/>

- Mrs. Jesleena Gonsalves

7 open source platforms to get started with serverless computing

What is serverless computing?

Serverless computing is a method of providing backend services on an as-used basis. A Serverless provider allows users to write and deploy code without the hassle of worrying about the underlying infrastructure. A company that gets backend services from a serverless vendor is charged based on their computation and do not have to reserve and pay for a fixed amount of bandwidth or number of servers, as the service is auto-scaling. Note that although called serverless, physical servers are still used but developers do not need to be aware of them.

1. **Apache OpenWhisk** It is a serverless, open source cloud platform that allows you to execute code in response to events at any scale. It's written in the Scala language. The framework processes the inputs from triggers like HTTP requests and later fires a snippet of code on either JavaScript or Swift.
2. **Fission** is a serverless computing framework that enables developers to build functions using Kubernetes. It allows coders to write short-lived functions in any programming language and map them with any event triggers, such as HTTP requests.
3. **IronFunctions** is a serverless computing framework that offers a cohesive microservices platform by integrating its existing services and embracing Docker. Developers write the functions in Go language.
4. **Fn Project** is an open source container-native serverless platform that you can run anywhere—on any cloud or on-premise. It's easy to use, supports every programming language, and is extensible and performant.
5. **OpenLambda** is an Apache-licensed serverless computing project, written in Go and based on Linux containers. The primary goal of OpenLambda is to enable exploration of new approaches to serverless computing.
6. **Kubeless** is a Kubernetes-native serverless framework that lets you deploy small bits of code without having to worry about the underlying infrastructure. It leverages Kubernetes resources to provide autoscaling, API routing, monitoring, troubleshooting, and more.
7. **OpenFaas** is a framework for building serverless functions with Docker and Kubernetes that offers first-class support for metrics. Any process can be packaged as a function, enabling you to consume a range of web events without repetitive boilerplate coding.

Kubernetes is the most popular platform to manage serverless workloads and microservice application containers, using a finely grained deployment model to process workloads more quickly and easily. With Knative Serving, you can build and deploy serverless applications and functions on Kubernetes and use Istio to scale and support advanced scenarios such as:

- Rapid deployment of serverless containers
- Automatic scaling up and down to zero
- Routing and network programming for Istio components

Ref : <https://opensource.com/article/18/11/open-source-serverless-platforms>

- Mr. Jigar Chauhan

Data is renewable energy and is also recyclable

Starting from a point of almost zero data, India has rapidly emerged as a data-rich economy, with a backbone of technology. The country began its data storage journey with Aadhaar, a 12-digit unique identity number obtained by residents based on their biometric and demographic data.

Data is the new economic growth driver and will fuel technologies such as artificial intelligence (AI) blockchain and machine learning (ML). “Data is renewable energy and is also recyclable, but the ownership of data is critical,” said Kiran Mazumdar-Shaw, chairperson and managing director of Biocon.

Data on its own has no value, per se, but its potential can be realised depending on the manner in which it is utilised. For instance, the value quotient of financial data gains meaning and higher traction if the data is monetised properly. The quality and scale of data needs to be gleaned for desired outcomes. Businesses can meet the required targets using real-time data. Likewise, e-commerce data offers companies insights into the lives of the consumer.

The government can leverage citizen data to develop the economy through a multi-stakeholder approach. “Multilateral architecture for global data governance facilitates the exchange of data between nations.

Data has begun to move beyond national boundaries. The access to data and sharing of data between countries is on the rise. India can capitalise on this opportunity as it has the bandwidth to build the digital backbone of many economies. This digital bridge will help build geo-political links.

The challenge lies in safeguarding the data. Security, economy and technology are the three fundamentals that comprise the data framework. “Every country should be self-reliant in data in terms of scale and privacy. We need a universal statutory declaration of digital rights. This is required to protect the individual rights in the digital world,” pointed out TV Mohandas Pai, chairman of Manipal Global Education Services and co-founder and chairman of Aarin Capital.

Many of the disruptive technologies are driven by data, which will determine the trade of the future. What’s required is a skilled workforce to augment the flow. Government of Karnataka (GoK) is preparing to boost the digital economy by meeting the upcoming demands of the industry. GoK plans to have a regulatory sandbox for further strengthening the ecosystem of tech startups. A legal framework will be in place to encourage startups to test their products before it goes live. When it becomes operational, Karnataka will be the first state in India to have such a framework.

“In the next five years, it is forecasted that the market for the transportation based data will be over \$75bn. By 2025, around 20 per cent of the data will belong to data sets,” added Shaw.

Clearly the prospects within this unfold enormous opportunities. Innovation is what incentivises intellectual property (IP) and IP is an integral part of monetising data.

Ref: <https://eandt.theiet.org/content/articles/2019/12/view-from-india-data-is-renewable-energy-and-is-also-recyclable/>

- Mrs. Jesleena Gonsalves

Digital Doomsday

The threat of cyber attack hangs over all of us, but how big could it get? Could hackers bring society to a standstill – a digital Armageddon?

Hundreds of thousands of cyber attacks are launched against critical energy, utility, banking, transport and healthcare systems every year, but could they ever bring the world's digital systems to their knees simultaneously to cause economic, social and political chaos on a truly global scale?

The answer lies in the efficacy of successful breaches identified to date and a better understanding of the computer systems, networks and cyber-security defences that make up the world's digital infrastructure.

Several cyber attacks on energy systems are already known to have taken place, including the penetration of a nuclear power plant in Iran (Stuxnet) and breaches that caused electricity blackouts in Ukraine.

It's much easier to hack the networks, servers, email accounts and databases used by critical national infrastructure (CNI) providers than it is to gain control of their operational systems, and the vast majority of attacks target these areas precisely because they are more vulnerable.

“With a growing number of actors seeking to disrupt this infrastructure, security is no longer a matter of implementing a firewall or completing a compliance checklist,” says Accenture principal director Thomas C Ryan. “Every point of entry – from the supply chain to HR and the distributed infrastructure that supports operations – is a potential vulnerability.”

Power outages are not the only type of incident that could lead to widespread panic if not immediately rectified – disruption to water and fuel supplies are equally likely to cause consternation among the civilian population. As water companies modify and automate their purification, distribution and maintenance processes, they have turned to IoT-connected control valves, pressure monitors, sensors and taps to streamline supply and cut operational costs.

US telco Verizon reported an attack on an unnamed utility company in 2016 after a hacktivist group with reported ties to Syria used SQL (code) injection and phishing techniques on a payment app web server to expose an operational control system (OCS) hosted on an old AS/400 mainframe system and change the mix of chemicals being used to treat tap water. Hackers also targeted North Carolina's Onslow Water and Sewer Authority in 2018.

Fuel and gas tend to traverse even lengthier supply and distribution chains than water, often crossing national boundaries, continents and oceans to reach businesses, consumers and emergency services. Disruption to those supplies would have an equally if not more profound impact on national and regional economies.

Attacks on financial systems too could lead to widespread civil unrest if enough people either lose or cannot access their money. The US Federal Bureau of Investigation (FBI) has already issued warnings about the dangers of large malware attacks on electronic cash machines which could stop citizens withdrawing cash.

Though currently at the early stage of its development, the Internet of Things (IoT) could also be the conduit for attacks on self-driving cars, delivery vans and autonomous trucks. Many of the world's municipal and district councils are embarking on widespread digitalisation of urban areas, using IoT sensors and monitors to control road congestion, traffic lights, street lighting and car parks, for instance, as well as public transport communication systems on railways, trams and bus routes.

Medical problems caused by traffic accidents, dehydration, hypothermia or malnutrition due to outages in people's homes would certainly put significant stress on already over-stretched public health systems. But hospitals, clinics, GP surgeries and other healthcare units are also undergoing the same processes of digitalisation.

The UK's NHS is a prime example, with management having identified technology as a critical enabler in continuing to provide adequate healthcare to an ageing population with dwindling resources.

Yet healthcare systems the world over are increasingly coming under assault from hackers. In May 2017, the WannaCry ransomware attack is estimated to have affected more than 230,000 computers running various unpatched versions of Microsoft Windows across 150 countries, many of which belonged to 80 NHS Trusts. A report by the National Audit Office reveals just how dangerous these attacks can be, with staff shut out of their devices and unable to access patient information. Medical equipment was locked or isolated from healthcare IT systems, with radiology and pathology departments unable to perform diagnostic imaging or test blood and tissue samples, for example.

Satellite systems often form the backbone of the world's broadcasting networks, and the television and media companies which use them are equally susceptible to another form of piracy: content theft. But it is the prospect of hackers gaining control of news and information bulletins that is most likely to send shivers up TV executives' and government ministers' spines.

The problems with social media, too, are well documented when it comes to spreading propaganda or inciting violence through ideological messages shared via online content. Though, as Cambridge Analytica amply demonstrated, nobody actually needs to hack social media to use it for the purposes of political manipulation – lax, or inefficient, content controls freely allow that type of activity already.

The threat of cyber attacks on critical systems is very real, but, in truth, bringing the world down on its digital knees would require a colossal application of resources and management skills that disparate groups of hackers have so far shown little or no signs of possessing.

“The vast majority of malicious cyber activity has taken place far below the threshold of armed conflict between states, and has not risen to a level that would trigger such a conflict,” wrote Eric Talbot Jensen in the Georgetown Journal of International Law. “Rather the majority of cyber activities so prevalent in the news involve the stealing of corporate secrets, the spreading of false information, or the breach of government systems in an attempt to steal state secrets.”

That makes the possibility of Cyber Armageddon seem unlikely based on what we know so far, but in the digital world things can change very quickly and it's paramount that nobody drops their guard.

Ref: <https://eandt.theiet.org/content/articles/2019/10/digital-doomsday/>

-Mrs. Jesleena Gonsalves

Benefits Of Meditation

People have been practicing meditation for millennia. This ancient practice is as pertinent nowadays as it was centuries ago. Meditation helps us quiet our minds, connect with our inner qualities and foster wisdom and awareness. Among the many meditation methods that are commonly practiced, mindfulness and awareness are especially precious given today's stressful, hectic lifestyles.

Meditation research has given us insights into how meditation works and what impact it has on our brains. There have been thousands of studies involving people from all walks of life and with every imaginable psychological profile. The work goes on – scientists continue to be intrigued by the potentially life-changing benefits of these practices.

The science of meditation

A recent meta-analysis study on the effects of mindfulness meditation on the brain was conducted by a team of researchers at the University of British Columbia. The study, titled “Is meditation associated with altered brain structure? A systematic review and meta-analysis of morphometric neuroimaging in meditation practitioners concluded that the brains of meditators were structurally different from those of non-meditators. For instance, the anterior cingulate cortex – the area associated with controlling impulses and maintaining attention – was found to have more tissue mass. The brains of consistent meditators were also found to have thicker tissue in those regions responsible for body awareness, enhanced focus, stress management and attention control.

These observations reflect a larger truth about brain neuroplasticity: throughout a human being's entire life, it is possible for his or her brain to undergo positive structural changes. Meditation studies have also given us a sneak peek of what actually happens when we practice. According to the research cited above, some brain regions are activated while others are deactivated during meditation. For instance, with regular practice, the amygdala (the brain region linked with processing sadness, anxiety and myriad negative emotions) shrinks in size.

A more recent article published in the Harvard Gazette called “When science meets mindfulness” looks more specifically at how mindfulness affects depression. This speaks to a question that many clinicians and their patients are asking: can mindfulness be a reliable alternative to conventional medicine in the treatment of anxiety, depression and drug addiction. This isn't a dream anymore – some health practitioners are successfully using a variety of integrative meditation techniques to help patients manage deficits in self-regulation.

Despite the great interest in the effects of mindfulness and other forms of meditation, such as transcendental meditation, on quality of life, there has been criticism of research methods as being insufficiently rigorous. One recent meta-analysis (a sort of overview of available research results) recently published in Springer's Annals of Behavioral Medicine looks closely at some of the studies focusing on the effects of mindfulness on chronic pain to ascertain their reliability. The conclusion was that while more rigorous research was warranted, there was a small but significant improvement concerning pain symptoms and that “Mindfulness meditation was associated with statistically significant improvement in depression, physical health-related quality of life, and mental health-related quality of life.”

Ref: <https://mindworks.org/blog/meditation-research-science-meditation/>

-Mrs. Rovina Dbritto

Announcement



Every student is interested in one particular domain;
hence he/she has good knowledge of that domain.

Hence, to share and expand our knowledge - ITSA presents:

Each One Teach One

Each One Teach One

is a One Semester Long Free Teaching & Learning Program that will conduct lectures taken by our own students of TE & SE IT. These lectures will be introductory lectures of 2-3 hours for the SE & TE Students that will cover major topics like Machine Learning, Data Science, Web/App/Game Development and many more.

There will be a limitation on the number of students who can attend these lectures. However, the students who'll register to *teach* will be given the first priority to attend these lectures.

Registration Link

https://docs.google.com/forms/d/e/1FAIpQLSfPQNNKBLhgJy-1m50FdObyo5DxItsHLA9MHBh_21f3fyqU8w/viewform?vc=0&c=0&w=1

Achievement

Placement Details

1. Chandan Saw – Paramatrix
2. Sourabh Kudturkar – Infosys
3. Prince P. – TCS



Internship Details

1. Aparna Sudhir- Internshala (Game Programming)

Up Coming Events

PROFILE OF IT DEPARTMENT

Our course aims at producing competent Computer Engineers who are not only experts in the field of IT Engineering but also competent in the other fields that are essential requirements for being a good Engineer. Our faculties are qualified, professionally experienced and have excellent visibility of the trends in the field of IT Engineering. Faculty members have well-rounded knowledge and experience in imparting knowledge, not only in the core discipline of IT Engineering but also related disciplines and sub-disciplines such as Artificial Intelligence, Cloud Computing, Big Data.

SCHEDULED DATE AND TIME

9th Dec. 2019 to 13th Dec. 2019
(Monday to Friday)

LAST DATE OF REGISTRATION

6th December 2019

PATRON

DR. J. B. PATIL
(Campus Director, UCoE)

CONVENER

MRS. YOGITA MANE
(HOD, IT Department)

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PROFILE OF THE INSTITUTE

Universal College of Engineering was established in 2012 as a part of Vidya Vikas Education Trust. It is affiliated to University of Mumbai. The College is accredited with B+ Grade in 1st Cycle of accreditation by NAAC. With its unique location just off the Western Express Highway, Universal offers a spacious & serene learning environment away from the congestion & pollution of the city at a distance of just 20 minutes from Dahisar Check Naka. Our college offers Bachelor's degree course in Civil, Computer, IT, ETRX, and EXTC. The campus boasts of spacious classrooms, state-of-the-art presentation equipment, an expansive library, intimate tutorial rooms, courtyards, the literati cafe, and above all, the serenity of the environment around. The campus is purpose-built for higher education and allows for blending of outdoor learning with intensive indoor class work.



CONVEYANCE

Complimentary pick-up and drop facility will be available from and to Borivali, Mira Road, Vasai and Thane (Pick-up at 8 am)



Universal College of Engineering

Accredited with B+ Grade by NAAC

in association with

Indian Society for Technical Education

invites you to participate in

ISTE Approved STTP on

DEVELOPING AND MANAGING IT INFRASTRUCTURE WITH DEVOPS

from 9th to 13th December 2019

ORGANIZED BY:

Department of Information Technology

Universal College of Engineering

Near Bhajansons Dairy & Shankeshwar
Punyadham Jain temple, Next to Kaman River,
Kaman Bhivandi Road,
Vasai (E) - 401 212.

PROGRAM CONTENT

DAY-1

- Introduction to Linux (Ubuntu)
- Hands-on of basic and advanced Linux commands
- Hands-on of installing packages on Ubuntu Linux

DAY-2

- Hands-on of XAMPP installation, hosting a web application on XAMPP, and Connecting to MySQL via PHP
- Hands-on of vim text editor
- Hands-on of Version Control System (Git)

DAY-3

- Installing Docker on Linux
- Working with Containers
- Building web server docker file
- To build, deploy and manage web or java application on docker

DAY-4 & DAY-5

- Software Configuration Management using Ansible
- Ansible: Introduction, Environment setup, YAML Basics, Ad hoc commands, Playbooks, Roles, Variables, Task automation using Playbooks
- Software Configuration Management and Provisioning using Puppet
- Puppet: Overview, Architecture, Installation, Configuration, Environment conf, Master, Agent setup, SSL Sign certificate setup, Puppet Modules to create a LAMP Stack

Certificates will be issued by ISTE to all the participants

FEE DETAILS

For Academic Staff
Rs. 2,500 (including food)

For Students
Rs. 800 (excluding food)
*Food Rs.1,000 extra

RESOURCE PERSONS

Prof. Mahendra Mehra

Experience: 10 Years

Area of Specialization: Cloud Computing, Networking and Security, DevOps, Linux System Administration. Resource Person in more than 20 Training Programs.

Mr. Sandesh Patil

Experience: 10 years (Industry + Teaching)

Area of Specialization: C/C++, Java, PHP, Linux, Laravel (PHP Framework)

HOW TO APPLY



Scan the QR code to open the online registration form. Interested candidates may register with the program by sending the attached registration form duly filled to:

The Convener,

Department of Information Technology,
Universal Engineering College, Near
Bhajansons & Punyadham, Kaman
Bhiwandi Road, Vasai, Thane- 401212.

along with the applicable registration fees. Payments can be made by Demand Draft/Cheque in favour of 'Universal College of Engineering' payable at Mumbai.

DEVELOPING AND MANAGING IT INFRASTRUCTURE WITH DEVOPS

REGISTRATION FORM

Name: _____

Designation: _____

Institution/Organisation: _____

ISTE Member: YES/NO:

ISTE Membership No.: _____

Address: _____

Phone: _____

Email: _____

Details of Payment

DD/Cheque No.: _____

Date: _____

Bank: _____

Date

Signature of Participant

Jesus or Santa: Who gives the Better Christmas Story?

Christmas has traditionally been about celebrating the birth of Jesus. The Gospel accounts of a virgin birth, angels appearing to shepherds, and wise men traveling from afar to see the baby Jesus in a manger provided a story that was convincing for our great-grandparents. That generation added symbols such as manger scenes, Christmas trees, lights, music and drama (ex. Dickens' *Christmas Carol*) to give Christmas the festive foundation so it would become the juggernaut of celebrations that it is today.



But since then, perhaps because of our increasing secularization and modern doubt over the Christmas story (C'mon – a virgin birth – Really?!), we have culturally swapped that story for Santa and his mission to give gifts to boys and girls who have managed to stay off the naughty list. It is a great story for kids, and it can safely be discarded when we get older since it never claims to be true – just safely fun. It seems a better story in our modern world when we can take a needed break from the harsh realities of real life and experience, with our kids, a fun story. So Santa dominates our radio and television and 'Happy Holidays' is becoming the Christmas greeting of choice. It is safer for a modern world steeped in doubt, anxious to avoid offending, and happy to have a season to pretend.

I have always loved good stories. Whether mythical (like *The Lord of the Rings*), sci-fi (like *Star Wars*), or historical (like *Braveheart*), a story with an insurmountable challenge or threat, an authentic hero, and a plot that sees the hero vanquish the villain, but in an astonishing way. Through a drama with a large scope, good stories have always absorbed my attention.

It was when I looked again at the Biblical Christmas story, to *before* the Gospel accounts of Jesus' birth that I started to see that it also was a great story, with a plot and a depth that rival all classics. Even taken purely as story, the Biblical Christmas story beats the Santa replacement story just about any way you look at it. But to see this, you need to grasp the Biblical Christmas story as it was meant to be understood – as one chapter in a long epic, spanning the entire universe and enveloping the entire human race.

Ref: https://considerthegospel.org/2015/12/10/jesus-or-santa-who-gives-the-better-christmas-story/?gclid=EALalQobChMllazt7LzL5gIVyhErCh0TUQp1EAAAYASAAEgJnCPD_BwE

-Ms. Mudra Doshi



Scan for previous edition

You can also send your articles to the following email id's:

mudra.doshi@universal.edu.in

Kaman Bhiwandi Road, Survey No. 146(Part), Village Kaman, Taluka Vasai, District Palghar -401212, Ph:8007000755