



Workshop

Department had organized 45 days workshop on **Android and Python Programming** for Third Year Student in collaboration with **“TechnoWings International IT Solutions”**. The main motive while arranging such workshop is to bridge gap between Academics and Industry and make the student Industry skilled and ready for working.

15th Aug 2023

Data science

Data science is an interdisciplinary academic field that uses statistics, scientific computing, scientific methods, processes, algorithms and systems to extract or extrapolate knowledge and insights from noisy, structured, and unstructured data. Data science also integrates domain knowledge from the underlying application domain (e.g., natural sciences, information technology, and medicine).^[3] Data science is multifaceted and can be described as a science, a research paradigm, a research method, a discipline, a workflow, and a profession. Data science is a "concept to unify statistics, data analysis, informatics, and their related methods" to "understand and analyze actual phenomena" with data. It uses techniques and theories drawn from many fields within the context of mathematics, statistics, computer science, information science, and domain knowledge. However, data science is different from computer science and information science. Turing Award winner Jim Gray imagined data science as a "fourth paradigm" of science (empirical, theoretical, computational, and now data-driven)

Shivraj Yadav (TYIF)



Augmented reality (AR)

Augmented reality (AR) is an interactive experience that combines the real world and computer-generated content. The content can span multiple sensory modalities, including visual, auditory, haptic, somatosensory and olfactory. AR can be defined as a system that incorporates three basic features: a combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects. The overlaid sensory information can be constructive (i.e. additive to the natural environment), or destructive (i.e. masking of the natural environment). This experience is seamlessly interwoven with the physical world such that it is perceived as an immersive aspect of the real environment. In this way, augmented reality alters one's ongoing perception of a real-world environment, whereas virtual reality completely replaces the user's real-world environment with a simulated one. Augmented reality is largely synonymous with mixed reality. There is also overlap in terminology with extended reality and computer-



Mrs. S. V. SARAF

Cloud Computing

Cloud computing is the on-demand availability of computer system resources, especially data storage (cloud storage) and computing power, without direct active management by the user.^[2] Large clouds often have functions distributed over multiple locations, each of which is a data center. Cloud computing relies on sharing of resources to achieve coherence and typically uses a pay-as-you-go model, which can help in reducing capital expenses but may also lead to unexpected operating expenses for users. In 2010, Microsoft launched Microsoft Azure, and Rackspace Hosting and NASA initiated an open-source cloud-software project, OpenStack. IBM introduced the IBM SmartCloud framework in 2011, and Oracle announced the Oracle Cloud in 2012. In December 2019, Amazon launched AWS Outposts, a service that extends AWS infrastructure, services, APIs, and tools. Examples include: Big data analytics. Internet of Things (IoT)

-Snehal Kadam(TYIF)



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Department Vision

To be recognized one among the premier Information Technology department in Maharashtra to empower the capabilities of students in education with professional ethics enabling students to reach higher goals in the field.

Department Mission

- To impart value based Technical Education in Information Technology.
- To support for technical knowledge of students in the field of Information Technology.
- To make the students efficient in various skill Sets in Information Technology.
- To encourage students for lifelong learning.

Message of HOD

It is our pleasure to present News Letter **“TANTRA”** of our department. This news letter is one of the ways in which we can disseminate the information about our department. The past semester was full of various activities by the students and faculty in Academic, Co-curricular and Extra-curricular activities. As you read through pages, you will realize that we have succeed in academics as well as in different co-curricular activities.

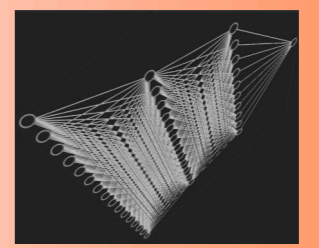
Mr. G.S. MISAL



Machine Learning

Machine learning (ML) is an umbrella term for solving problems for which development of algorithms by human programmers would be cost-prohibitive, and instead the problems are solved by helping machines 'discover' their 'own' algorithms, without needing to be explicitly told what to do by any human-developed algorithms.^[2] Recently, generative artificial neural networks have been able to surpass results of many previous approaches. Machine learning approaches have been applied to large language models, computer vi-

sion, speech recognition, email filtering, agriculture and medicine, where it is too costly to develop algorithms to perform the needed tasks.



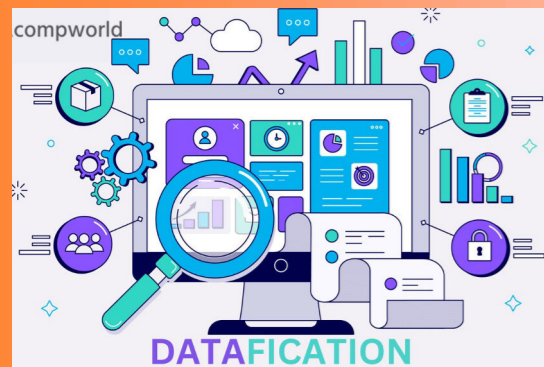
The mathematical foundations of ML are provided by mathematical optimization (mathematical programming) methods. Data mining is a related (parallel) field of study, focusing on exploratory data

analysis through unsupervised learning. ML is known in its application across business problems under the name predictive analytics. Although not all machine learning is statistically-based, computational statistics is an important source of the field's methods.

-Mrs. R.K.Malgonde

Datafication

Datafication is a technological trend turning many aspects of our life into data^[1]^[2] which is subsequently transferred into information realised as a new form of value. Kenneth Cukier and Viktor Mayer-Schönberger introduced the term *datafication* to the broader lexicon in 2013. Up until this time, datafication had been associated with the analysis of representations of our lives captured through data, but not on the present scale. This change was primarily due to the impact of big data and the computational opportunities afforded to predictive analytics. Datafication is not the same as digitization, which takes analog content—books, films, photographs—and converts it into digital information, a sequence of ones and zeros that computers can read. Datafication is a far broader activity: taking all aspects of life and turning them into data [...] Once we datafy things, we can transform their purpose and turn the information into new forms of value. There is an ideological aspect of datafication, called *dataism*: "the drive towards datafication is rooted in a belief in the capacity of data to represent social life, sometimes better or more objectively than pre-digital (human) interpretations." Examples of datafication as applied to social and communication media are how Twitter datafies stray thoughts or datafication of HR by LinkedIn and others. Alternative examples are diverse and include aspects of the built environment, and design via engineering and or other tools that tie data to formal, functional or other physical media outcomes. Data collection and -processing for optimal control (e.g. shape optimization) is an example.



Rohit Pawar (TY-IF)

Cyber Security

Computer security, cyber security, digital security or information technology security (IT security) is the protection of computer systems and networks from attack by malicious actors that may result in unauthorized information disclosure, theft of, or damage to hardware, software, or data, as well as from the disruption or misdirection of the services they provide.

The field is significant due to the expanded reliance on computer systems, the Internet,^[3] and wireless network standards such as Bluetooth and Wi-Fi. Also, due to the growth of smart devices, including smartphones, televisions, and the various devices that constitute the Internet of things (IoT). Cybersecurity is one of the most significant challenges of the contemporary world, due to both the complexity of information systems and the societies they support. Security is of especially high importance for systems that govern large-scale systems with far-reaching physical effects, such as power distribution, elections, and finance.

One of the earliest examples of an attack on a computer network was the computer worm Creeper written by Bob Thomas at BBN, which propagated through the ARPANET in 1971. The program was purely experimental in nature and carried no malicious payload. A later program, Reaper, was created by Ray Tomlinson in 1972 and used to destroy Creeper.



-Shanitej Patil (SYIF)

FACULTY PROFILE

| SR. NO | STAFF NAME | DESIGNATION |
|--------|---------------------|-------------|
| 1. | Mr. G. S. Misal | HOD |
| 2. | Mrs. R. K. Malgonde | Lecturer |
| 3. | Ms. T. B. Lokhande | Lecturer |
| 4.. | Mrs. S. V. Saraf | Lecturer |
| 5. | Ms. S. S. Raut | Lecturer |
| 6. | Mr. A. A. Janarao | Lecturer |
| 7. | Mr.S. W. Koli | Lecturer |
| 8. | Mrs. H. N. Vhawal | Lecturer |
| 9. | Mrs. S. A. Parkhe | Lecturer |

DEPARTMENTAL RESULT FOR A.Y. 2022-23

| Sr. No. | Name of Students | Class | Percentage | Rank |
|---------|-----------------------------|-------|------------|--------|
| 1 | Patil Shanitej Sanjay | F.Y. | 91.00 | First |
| 2 | Randave Dnyaneshwar Appa | F.Y. | 90.25 | Second |
| 3 | Pujari Sharvari Sanjeev | F.Y. | 90.00 | Third |
| 4 | Kadam Snehal Chandrashekhar | S.Y. | 94.50 | First |
| 5 | Pawar Rohit Shrikant | S.Y. | 92.88 | Second |
| 6 | Waghmare Shravani Sitaram | S.Y. | 91.88 | Third |
| 7 | Chavan Avadhut Sunil | T.Y. | 91.20 | First |
| 8 | Wagh Pavan Dagadu | T.Y. | 90.67 | Second |
| 9 | Shingade Pratik Sukhadev | T.Y. | 90.53 | Third |

WATER DISTRIBUTION DURING ASHADHI WARI

Water Distribution during Aashadhi Wari by the SVERI's College of Engineering(POLY),Pandharpur to the All the Devotees of Vithala .



Shot on OnePlus



STUDENT ACHIEVEMENTS FOR A.Y.2022-23

| SR. NO | NAME OF STUDENT | EVENT | RANK |
|--------|----------------------------------|----------------------|------|
| 1. | Sagar Afar. | Programming Language | 1st |
| 2. | Namrata Rokade Sharvari Pujari | Paper Presentation | 1st |
| 3. | Yash Mahajan | Batminton | 1st |
| 4. | Pawar Rohan | Wrestling | 1st |
| 5. | Shivraj Yadav | Programming Language | 2nd |
| 6. | Mohini Bhargande Sakshi Doke | Kho-Kho | 2nd |
| 7 | Digamber Shinde Raviraj Waghmare | Project Exhibition | 3rd |

FACULTY ACHIEVMENT

| Name Of Faculty | NPTEL-FDP |
|-----------------|---------------------|
| Mr.G.S.Misal | Computer Networking |
| Ms.T.B.Lokhande | Computer Networking |
| Mr.A.A.Janarao | JAVA Programming |
| Mr.S.W.Koli | Computer Networking |

EDITORIAL

Its our pleasure to present this issue of TANTRA with new design. We are thankful to all faculty members and student friends for their co-operation. We will continue the journey of learning and implementing technologies in future also.

Thank you all...!

Mr. G.S.Misal

Mrs.S.V.Saraf