

TEQZONE

2022-2023

Institute Vision

To be a Global Leader in imparting Quality Technical Education to produce Competent, Technically Innovative Engineers imbued with Research Aptitude, Entrepreneurship and Social Responsibility.

Institute Mission

- 1.To nurture the Students with Fundamental Engineering Knowledge enriched with Technical Skills.
- 2.To create Conducive Environment to nurture Innovation and Interdisciplinary Research.
- 3.To develop Professionals through Innovative Pedagogy focusing on Individual Growth, Discipline, Integrity, Ethics and Social Responsibility.
- 4.To foster Industry-Institution Partnerships Leading to Skill Development and Entrepreneurship.



DEPARTMENT VISION

To be a center for academic Excellence in Computer Science and engineering Education, Research and Consultancy

Contributing Effectively to meet industrial and social needs



Department Mission

- i. To Impart quality technical education with global standards.
- ii. To Provide a platform for harnessing Industry oriented technical skills with inter – disciplinary research awareness.
- iii. To Promote entrepreneurship and leadership qualities imbued with professional ethics



ABOUT DEPART MENT

The Department of Computer Science and Engineering offers 4 year Degree which is established in the year 2007 with intake of 60 seats in CSE. It is approved by AICTE and Affiliated to JNTUA, Anantapur. In 2011 post graduate programe (M.Tech) in Computer Science & Engineering is introduced with an intake 18 seats. An additional intake of 6 seats was incorporated in 2013, total intake of M.tech program reaches to 24 seats. The course is flexible and has been structured to meet the evolving needs of the IT industry. Since the Management of this college includes the highly educated persons, it understands the value of the latest applications. employees or to turn as employers by taking up some entrepreneurial steps.



Program Educational Objectives (PEO)

PEO1: Graduates of the Program will have Strong fundamental knowledge in Computer Science & Engineering, technical competency and problem-solving skills to develop innovative solutions.

PEO2: Graduates of the Program will have Necessary domain knowledge and successful professional career in IT and allied fields of Computer Science & Engineering.

PEO3: Graduates of the Program will have Ability to pursue higher education and Entrepreneurship.

PEO4: Graduates of the Program will have Necessary skills for lifelong learning, teamwork and research to cater for real time needs of industry and society.

Programme Specific Outcomes (PSOs)

PSO1: Apply Software Engineering Principles and Practices to provide software solutions.

PSO2: Design and Develop Network and Mobile based applications.

PSO3: Design innovative algorithms and develop effective code for business applications.



ACKNOWLEDGEMENT

We extend our sincere thanks to

Honorable Chairman

Dr. K.V. Subba Reddy

Secretary & correspondent

Smt. S. VijayaLakshamma

Principal

Dr. J. Kanna Kumar

HOD

Dr. C.Md Gulzar

All our staff members for their humble

Co- operation and involvement in their creation of bytes,

For the year 2022-2023





Message from the Chair man

It's been a real pleasure to know that the Department of CSE is hosting their first ever National Level Technical Symposium "TEQZONE", AND I' am glad to hear that it is being organized wholly for the students with guidance of the staff members. Such combined effort is always encouraged and bring out good results.

The Department of computer Science and Engineering has always conducting activities which helps in Development of students into leaders, I hope TEQZONE2022 is a huge success and adds a new star in the history of the department

With Regards

Dr. K.V. Subba Reddy,

Founder – Chairman,

Dr. K.V. Subba Reddy Institute of Technology,

Kurnool- 518218,





Message from the Correspondent

I feel very proud that the Department of CSE is Organizing a national level technical symposium “TEQZONE” on 2022.

The 21st century is advancing rapidly by multipronged scientific inventions and discoveries in that the Computer Science and Engineering is playing the vital role in all scientific developments. The has Com that without Computer Science Engineering nothing is going to move I this universe. In this perspective the contribution the development of society by this department is vital in all sphere of life.

I heartily wish the staff and students of the department in their endeavor to bring in a house magazine which will otherwise contribute to the highest learning of this magnificent engineering.

With Regards

Secretary & correspondent

Smt. S. VijayaLakshamma,

Dr. K.V. Subba Reddy Institute of Technology,

Kurnool- 518218,





Message from the Principal

In the ever-changing field of technical education, technology is moving at a very fast pace. What was break through yesterday is obsolete today. This has made it improve that future technocrats must be familiar not only with technical skills but also with the technology of tomorrow. I hope young engineers passing from this instigation will create difference in Indian and global scenario.

I expect my students to be sincere in their work. They should have never given up attitude and unquenchable thirst of know ledge. I am sure that this magazine will provide platform to students to sharpen their skills.

With Regards

Dr. J. Kanna Kumar,

Principal

Dr. K.V. Subba Reddy Institute of Technology,

Kurnool- 518218,



Message from the HOD

I wish that this seminar provides an opportunistic forum and vibrant platform for the engineers to share their original research work and practical development experiences and emerging issues.

With Regards

Dr. C. Md Gulzar,

CSE-HOD

Dr. K.V. Subba Reddy Institute of Technology,

Kurnool- 518218,



ABOUT COLLEGE

This institution was established in the year 2007 by Dr. K.V. Subba Reddy, Chairman, Dr. K.V. Subba Reddy, Chairman, Group of institutions and his wife Smt. S. Vijaya Lakshamma correspondent K.V. Subba Reddy group of institutions with an altruistic motive of providing deserved technical education to the students with humble education background. Dr. K V SRIT is located at Dupadu Village, On highway NH-44 to words Kurnool to Bangalore, in a sprawling area spreading over 40 acres amidst lush green fields the scenic landscape and the serene environment is absolutely conducive for academic pursuits. The institute which is 9km away from Kurnool city can be reached by bus or auto. The institute offers 5 UG Programs in CSE, ECE, EEE, ME and CE and five PG Programs in MBA, MTech (ECE), MTech(EEE) MTech (CE) MTech (CSE) , The Institution Has registered considerable growth in terms of infrastructure with untiring efforts of management, the departments are accommodated with highly qualified and experienced faculty members. The institute is marching a head by imparting quality technical education with an objective of producing young engineers and managers endowed with dynamic skills and prudence to meet their future challenges. For more details visit WWW.drkvsrit.in.



Student Articles



Intrusion Detection System

With the ever-increasing sophistication of cyber-attacks, it's becoming more and more important to have robust security measures in place to protect your computer network. One of the most effective ways to do this is through an intrusion detection system (IDS). In this article, we'll take a closer look at what an IDS is, how it works, and why it's essential for maintaining the security of your network.

What is an Intrusion Detection System?

An IDS is a security tool designed to monitor network traffic and detect any suspicious or unauthorized activity. It works by analysing network packets and comparing them against a database of known attack signatures, looking for any signs of malicious activity. If it detects something suspicious, it will generate an alert, allowing administrators to investigate the incident and take appropriate action.

There are two main types of IDS:

host-based and network-based. Host-based IDS (HIDS) run on individual computers, monitoring system activity and detecting any unusual behaviour.

Network-based IDS (NIDS), are placed at strategic points throughout the network, monitoring traffic as it passes by.



How does an IDS work?

An IDS uses a combination of signature-based and anomaly-based detection to identify potential security threats. Signature-based detection involves Comparing network traffic against a database of known attack

signatures. These signatures are created by analysing the behaviour of known malware and other types of attacks, allowing the IDS to quickly identify them if they appear on the network.

Anomaly-based detection, on the other hand, involves analysing network traffic for any patterns that deviate from normal behaviour. This can include unusual levels of traffic, unexpected protocols or ports, or other anomalous behaviour that could indicate a potential attack.

Once the IDS has detected something suspicious, it will generate an alert, which can be sent to the system administrator via email or other notification methods. The administrator can then investigate the incident and take appropriate action, such as blocking traffic from a specific IP address or disconnecting a compromised device from the network.

Why do you need an IDS?

An IDS is an essential tool for maintaining the security of your network. Without it, you may not even be aware that your network has been compromised until it's too late. By detecting potential security threats in real-time, an IDS can help you respond quickly to minimize the damage caused by an attack.

In addition to detecting attacks, an IDS can also be used to monitor network performance and identify potential bottlenecks or other issues that could impact network performance. This can help you optimize your network and ensure that it's running at peak efficiency.

Advantages of IDS

Advantages

Early detection of attacks: An IDS can detect security threats and attacks in real-time, enabling network administrators to take action before the attack can cause damage.

Reduced downtime: The quick detection of attacks and an immediate response can minimize the time a system or network is down, reducing business disruptions.

Centralized monitoring: An IDS provides a centralized location for monitoring multiple systems, making it easier for network administrators to manage network security.

Cost-effective: Compared to other security measures, such as hiring a dedicated security team or purchasing expensive hardware, IDS can be more cost-effective.

Customizable: IDS can be customized to meet specific security needs and requirements.

Disadvantages of IDS

False Positives: An IDS can generate false alarms or alerts, leading to unnecessary investigation and potential system downtime.

Limited visibility: IDS can only detect attacks that are in their signature database or behavioural baseline. New and unknown threats may not be detected by IDS.

High skill level required: IDS requires a high level of technical expertise to configure, manage, and monitor effectively.

Overhead: IDS can put additional overhead on a network, causing slowdowns and delays in data transmission.

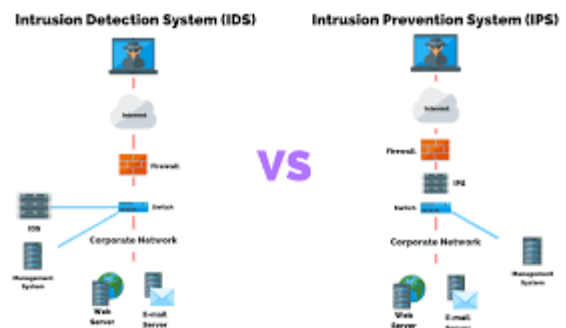
Dependence on updates: An IDS relies on up-to-date signatures and behavioural baselines to detect threats. If updates are not installed regularly, the IDS may miss new threats.

Conclusion

As cyber-attacks become more sophisticated, it's more important than ever to have robust security measures in place to protect your network. An intrusion detection system is one of the most effective tools available for detecting potential security threats and minimizing the damage caused by an attack. Whether you're running a small home network or a large corporate infrastructure, an IDS is an essential component of your security toolkit.

An intrusion detection system can be used for monitoring the file systems for changes. It is

helpful in detecting what changes are made to the system after an attack. An intrusion detection system is used to detect several types of malicious behaviours that can compromise the security and trust of a computer system. We intend to avoid access and keep track of the intruder's attempts and intentions. Such a system can make a big addition to the security in today's world to avoid different kinds of attacks like Crypto Locker, WannaCry, and other Ransomware attacks.



Intrusion Detection Systems and firewalls are both cybersecurity solutions that can be deployed to protect an endpoint or network. However, they differ significantly in their purposes.

An IDS is a passive monitoring device that detects potential threats and generates alerts, enabling security operations center (SOC) analysts or incident responders to investigate and respond to the potential incident. An IDS provides no actual protection to the endpoint or network. A firewall, on the other hand, is designed to act as a protective system. It performs analysis of the metadata of network packets and allows or blocks traffic based upon predefined rules. This creates a boundary over which certain types of traffic or protocols cannot pass.

Since a firewall is an active protective device, it is more like an Intrusion Prevention System (IPS) than an IDS. An IPS is like an IDS but actively blocks identified threats instead of simply raising an alert. This complements the functionality of a firewall, and many next-generation firewalls (NGFWs) have integrated IDS/IPS functionality. This enables them to both enforce the predefined filtering rules (firewalls) and detect and respond to more sophisticated cyber threats (IDS/IPS). Learn more about the IPS vs IDS debate here.

Selecting an IDS Solution

An IDS is a valuable component of any organization's cybersecurity deployment. A simple firewall provides the foundation for network security, but many advanced threats can slip past it. An IDS adds an additional line of defense, making it more difficult for an attacker to gain access to an organization's network undetected.

When selecting an IDS solution, it is important to carefully consider the deployment scenario. In some cases, an IDS may be the best choice for the job, while, in others, the integrated protection of an IPS may be a better option. Using a NGFW that has built-in IDS/IPS functionality provides an integrated solution, simplifying threat detection and security management

Conclusion:

Check Point has many years of experience in developing IDS and IPS systems that provide a high level of threat detection with very low error rates, enabling SOC analysts and incident responders to easily identify true threats. To see our NGFWs, with integrated IDS/IPS functionality, in action, request a demonstration or simply contact us with any questions. Furthermore, you're welcome to learn about preventing attacks on IoT networks and devices in this webinar.

R. Bhavya (20FH1A0532)
(III-II SEM CSE)

3 use cases of how Catgut will revolutionize conversation

It's no mystery that ultra-modern language fashions like Catgut have long passed our wildest expectancies. It's surprising and even truly eerie to suppose that a language model possesses a broad expertise base and the potential to answer (nearly) any query convincingly.

Just a few hours after the release of this version, the hypothesis started approximately which fields of activity may be enriched or even changed by way of these models, which use instances can be carried out, and which of the various new begin-up thoughts arising from Catgut will prevail.

As choice-makers in an employer, it's crucial to apprehend how those advancements can be used to feature fees.

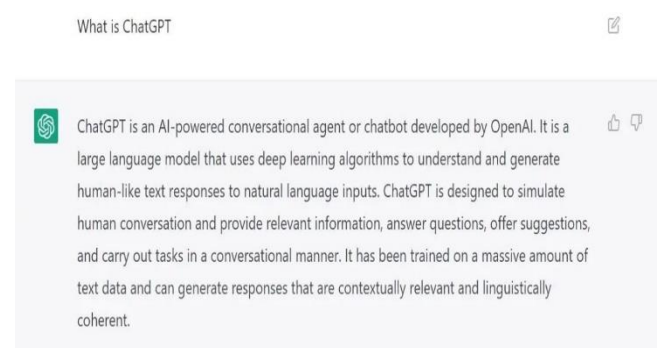
In this weblog publish, we can focus on the background in preference to the hype, offer examples of particular use cases in company conversation, and explain how implementing these AI structures may succeed.

There isn't any doubt that the continuous improvement of synthetic intelligence is gaining momentum. While Catgut is primarily based on a 3rd-technology version, a "GPT-4" is already on the horizon, and competing merchandise also are awaiting their vast second.



What is Catgut?

If you ask Catgut this question, you'll get hold of the subsequent answer:



What is Catgut simulation by Catgut

In other words, "Catgut is a massive language model trained to utilize Open AI to apprehend and generate natural language. It uses deep getting-to-know and synthetic intelligence generation to conduct human-like customer conversations."

Catgut is the modern representative from a class of AI systems that responds to human language (Texts). It is called "Natural Language Processing," or NLP for quick. It is manufactured from an entire chain of innovations that began in 2017 with a new AI

architecture.

In the subsequent years, the first AI fashions evolved primarily based on this structure that reached human-degree language understanding. In the ultimate years, the models learned to write and even have complete conversations with the consumer using Catgut.

Catgut stands out for generating credible and appropriate responses to user requests compared to other models. Chart can write programs, add comments to programs,

In addition to Catgut, there are many different language fashions in distinct forms: open source, proprietary, with dialog alternatives, or other abilities. It has become apparent that those abilities continued to develop with larger fashions and extra (specifically extraordinary) facts.

Unlike at the start predicted, there appears to be no higher limit. Conversely, the larger the models, the more abilities they gain!

These linguistic capabilities and the flexibility of Catgut are excellent, but using such large fashions is only sometimes precisely resource-friendly. Large models like Catgut are operated via external vendors who price every request to the model.

In addition, every request to large models now not simplest generates more expenses but consumes extra power and, for this reason, impacts the surroundings.

For instance, most chat requests from customers do not require comprehensive information about world history or the capability to provide amusing answers to every question. Instead, present chatbot offerings tailored to business statistics can deliver concise and correct solutions at a

fraction of the fee.

The infographic is titled "ChatGPT" and is organized into three columns: "Examples", "Capabilities", and "Limitations".

- Examples:** Three boxes containing user prompts: "Explain quantum computing in simple terms" →, "Got any creative ideas for a 10 year old's birthday?" →, and "How do I make an HTTP request in Javascript?" →.
- Capabilities:** Three boxes listing features: "Remembers what user said earlier in the conversation", "Allows user to provide follow-up corrections", and "Trained to decline inappropriate requests".
- Limitations:** Three boxes listing drawbacks: "May occasionally generate incorrect information", "May occasionally produce harmful instructions or biased content", and "Limited knowledge of world and events after 2021".

At the bottom of the infographic is a search bar with the text "What is ChatGPT|".

Modern Language Models in Business Applications

Despite the potential environmental and monetary fees related to large language models like Catgut, many decision-makers nevertheless want to put money into them.

The reason lies in their integration into organizational procedures. Large generative fashions like Catgut permit us to apply AI in each phase of enterprise interplay: incoming patron verbal exchange, communicate-making plans and organization, outgoing purchaser communicate and interplay execution, and finally, method analysis and development.

The following will explain how AI can optimize and streamline those communication tactics. It quickly becomes apparent that using an unmarried superior AI model is sometimes only a depend. Read more about what is Artificial intelligence.

Instead, it will become evident that a mixture of multiple models can efficiently cope with the challenges and supply the favoured monetary blessings in all stages of interaction.

For instance, AI structures are becoming increasingly applicable in communication with suppliers or different stakeholders.

However, demonstrating the revolutionary impact of recent AI models more excellently concretely allows us to remember the kind of interaction crucial for every employer: communicate with the customer.

Use Case 1: AI-powered Customer Interactions.

Challenge

Customer inquiries are received through various channels (emails, contact forms on the internet site, apps, etc.) and initiate internal procedures and workflows in the CRM gadget.

Unfortunately, the method could be more efficient and result in delays and multiplied charges because inquiries or a touchdown in a crucial inbox need to be directed. It reduces performance and results in negative consumer satisfaction and excessive expenses.

Existing CRM structures often must be wholly integrated into organizational workflows and require additional inner tactics based on a few employees' organic routines or managerial know-how.

Solution

Customer communication may be a group venture, but AI systems can help automate and enhance it. With the help of AI, making plans, initiating, and routing patron interactions may be more effective.

The system can automatically analyse content and statistics and decide how great to deal with the interplay primarily based on appropriate escalation ranges.

Modern CRM Software are already able to procedure formal inquiries with the use of low-price chatbots or reaction templates. But suppose the AI recognizes that an extra

complex examination is a gift. In that case, it may prompt an AI agent like Catgut or a customer service consultant to take over the conversation.

manually described but found by the AI machine.

Implementing an integrated system can grow the performance of a corporation, lessen delays and mistakes, and ultimately lead to higher revenue and earnings.

Use Case 2: Outgoing Customer Communication with AI.

Challenge

Customers expect their inquiries to be right away, transparently and exactly replied to.

A not-on-time or bad reaction, a lack of facts, or uncoordinated communication among one-of-a-kind departments are breaches of consideration that may have a negative lengthy-time period impact on customer relationships.

Unfortunately, terrible experiences are not unusual in many corporations. It is often because current chatbots use popular solutions and templates and are most effective, only sometimes able to entirely and conclusively answer purchaser inquiries.

In comparison, superior AI retailers like Catgut have better communicate abilities that permit clean purchaser verbal exchange.

New demanding situations arise when the request attains the right customer support employees. Missing information frequently results in sequential requests among departments, ensuing in delays.

Once techniques run in parallel, deliberately, or by accident, there's a chance of incoherent conversation with the purchaser. Ultimately, internally and externally, transparency is

missing.

Solution

AI systems can aid groups in all areas. Advanced fashions like Catgut have the vital linguistic abilities to technique many purchaser inquiries. They can talk with clients and, at the same time, ask for inner requests.

It makes customers now not sense disregarded through a chatbot. The technical improvements of the beyond year allow AI dealers to reply to requests not best faster but additionally greater it should. It relieves the customer service and inner technique participants and ultimately ends in better patron delight.

AI fashions can also support human personnel in a communicate. As stated at the beginning, there frequently needs to be more correct and unique facts available in the shortest possible time.

Companies strive to break down statistics silos to make getting the right of entry to relevant information more accessible. However, this will result in longer processing times in customer service because the vital records must first be amassed.

The critical problem is that information may be supplied in numerous bureaucracies, consisting of textual content, tabular statistics, databases, or inside structures like previous communication chains.

Modern AI systems can handle unstructured and multimodal statistics assets. Retrieval systems connect customer requests to diverse information assets. The different use of generative models like GPT-3 lets the located facts correctly synthesize into understandable text.

Individual “Wikipedia articles” may be generated for each customer request.

Alternatively, the customer support employee can ask a chatbot for the necessary information that’s without delay and understandably supplied.

An included AI machine no longer best relieves customer service but also different technical departments. This sort of machine can increase performance for the duration of the company.

Use Case 3: Analysis of conversation with AI.

Challenge

Robust and efficient techniques no longer arise on their own. However, through non-stop comments and steady enhancements.

An organization desires a non-stop development technique to ensure green inner communicate, correctly manage delays in customer service, and behaviour-end result-orientated income conversations. The use of AI systems no longer alternates this precept.

However, businesses face a hassle in external communication: language is a black field. Words have unheard-of records density precisely because their use is deeply rooted in context and tradition.

This method that corporations stay away from classical statistical-causal analysis due to the fact communicate nuances is hard to quantify.

Existing solutions, therefore, use proxy variables to degree achievement and behaviour experiments. While overarching KPIs, which include delight ratings, may be extracted, they have to be acquired from the consumer and regularly have little, which means.

At the same time, it is often uncertain what may be mainly changed in client conversation to alter these KPIs. It is tough to research interactions in elements, pick out dimensions and levers, and in the long run, optimize

them.

Most of what customers want to reveal approximately themselves immediately exist in text and language and evades analysis. This trouble arises with the use of AI help structures and with customer support representatives.

Solution

While modern-day language models have obtained much attention due to their generative talents, their analytical skills have also made sizable strides.

The potential of AI fashions to respond to customer inquiries demonstrates advanced information of language that's essential for improving included AI systems. Another utility is the evaluation of conversations, which have the analysis of clients and their own personnel or AI assistants.

Using synthetic Artificial Intelligence Software, customers can be more precisely segmented by studying their conversations. Significant issues are captured, and purchaser critiques are evaluated.

Semantic networks may be used to discover which institutions one-of-a-kind patron corporations have with products. In addition, generative models are used to become aware of dreams, ideas, or opinions from a wealth of client voices.

Imagine being capable of going through all purchaser communication in an element instead of depending upon synthetic KPIs – that's precisely what AI fashions make viable.

Of route, AI systems also offer the ability to analyse and optimize their techniques. AI-supported dialogue evaluation is a good place for an application currently being intensively researched.

This era allows, as an example, the examination of sales conversations about hit closures. Breaking points in the verbal exchange, modifications in temper, and topics are analysed to become aware of the ultimate course of verbal exchange.

This form of remarks is precious no longer simplest for AI assistants but additionally for personnel because it could also be performed at some communication point.

In precis, AI systems improve the breadth, intensity, and velocity of feedback approaches. It lets the corporation be agile in responding to trends, goals, and consumer evaluations and further optimizing internal techniques.

Obstacles to recollect while imposing AI systems

The utility of AI systems can essentially revolutionize communication with customers. Similar potential can also be verified in other regions, such as procurement and know-how management, which can be mentioned in more excellent elements inside the accompanying materials.

However, even the most advanced AI models still need to be equipped for deployment in isolation. It takes revel in, suitable judgment, and a properly-coordinated system of AI models to flow from experimentation to robust implementation.

The integration of language models is even more vital than the models themselves. Since language fashions act as the interface between computers and humans, they have to meet precise necessities.

Unique structures that intervene in painting strategies ought to study from the hooked-up systems of the company. As part of the interface era, factors that include equity, impartiality, and truth-checking should be

incorporated into the machine.

In addition, the device wishes a right-away intervention capability for personnel to perceive mistakes and realign the AI fashions if important. This “energetic mastering” isn’t always trendy. However, it can distinguish between theoretical and sensible efficiency.

As described earlier, there are many language models with one-of-a-kind talents. Using a couple of models that run both on-web sites and at once from outside companies affords new demands on the infrastructure.

It is also vital to consider that critical statistics transfer is only sometimes possible with cautious remedy of personal statistics, specifically when crucial organization information must be included. Therefore, the answer’s structure and fashions should be selected and blended according to the necessities.

Finally, there is the query of whether or not to rely on solution providers or increase your very own (partial) models. Despite some advertising and marketing claims, there’s yet to be a popular answer that meets all requirements.

Depending on the software, there are providers of fee-effective partial responses. Making a choice calls for these companies’ expertise, solutions, and limitations.

Other Articles on AI:

Is Artificial Intelligence a Threat or a Benefit?
Artificial Intelligence: Technology that Hosts
Race between Enterprises
Top 10 Ways Artificial Intelligence Future
will Change the World

Conclusion

Using AI structures in patron conversations can improve and automate strategies. A primary goal for companies should be optimizing and streamlining their conversation methods. AI structures can guide this through making plans, initiation, and forwarding of purchaser interactions more effective and by using both activating a chatbot like Catgut or a customer support representative for additional complicated inquiries. By combining unique models in a focused manner, meaningful hassle-solving may be accomplished in all stages of interplay, producing the preferred monetary benefits.

P. CHANDANA (20FH1AO531)
III-II CSE DEPARTMENT

Child Internet Safety: How to Avoid Online Threats Against Children

Browsing the internet can be a dangerous activity for younger children. Even though parents cannot stop Internet access for younger children, it is essential that they should take precautionary measures and give importance to child internet safety. Even if a child is only using kid-friendly websites, it is always safer to monitor your child's activity. Young children are not very aware of the threats that they can face online. This is why parents must find ways to protect children from the various threats that they might encounter online.



Image Source: pixels

Online Threats Against Children

There are many issues that younger users can face while browsing the Internet. Be it internet trolls, inappropriate content, or online predators, young children need to be protected from such dangers. The Internet is quite essential for people of all generations and is required in almost all aspects of today's life.

A study shows that children on social media feel like the biggest threat to them online is bullying and scary videos. However, parents

are more scared about threats like grooming and exposure to explicit content. Even though cyberbullying is a major threat to users online, it is very damaging for young users. There are multiple other threats, like stalking and online harassment, that could potentially harm young children psychologically. With so many threats looming on young children who have access to the Internet, it becomes very important to find ways to protect them. Read more about What is cyberbullying? How to control it in schools?

However, providing a safe environment for children so that they do not face any unfortunate incidents online is equally important. That is why it is suggested that parents must set up parental controls and block websites from their devices. Additionally, it is important for parents to monitor their child's online activity so that they can avoid any situations that can harm their child.

Why Monitor Internet Activity for Young Children

A study revealed that children from the ages of four to thirteen feel that the most dangerous thing for them online are scary videos, rude messages, and age-inappropriate content. However, we know that these threats are quite minimal in comparison to other issues like grooming, online stalking, and cyberbullying. That is why parents must be aware of their child's online activity. Here are some reasons why you must monitor your child's online activity.

There are many malicious people online that lure children into doing things that can be harmful to them. If you are not watching who your child interacts with, there are chances that they could be prey to an online predator. Predators find it easy to target children online so that they can groom their impressionable minds.

It is also notable that even if your child only interacts with friends, they could be a bad influence on them. You must keep an eye on your child's interaction with their friends so that you can ask them to minimize contact with people who can influence them into doing bad things. Young children are more prone to follow activities under peer pressure, so it is beneficial to keep a check on your child's friend circle, so they do not end up doing morally corrupt things.

There are many websites online that have inappropriate content on them. Even though these websites are age-restricted, they do not have strict age verification measures. If you do not monitor your child's activity, they could access these websites without your knowledge. Content meant for adult audiences should not be easily accessible to young children, but there is a lack of proper measures to stop this.

Another reason you should be aware of your child's online activity is to limit their screen time. If your child is spending too much time on the Internet, you must set rules to ensure that they decrease their screen time. Children need to spend time outside and doing other activities rather than spending all their time on the Internet.

It is better to take precautionary measures so that your child can safely browse the Internet rather than putting them in harm's way. If you do not have proper knowledge of your child's Internet activity, you will be less aware of what issues they can face. This will also make them more prone to interacting with malicious people without your knowledge.

Read about What are the causes of Cybercrime and Preventive Measures
How To Maintain Privacy for Children
When it comes to monitoring young children's online activity, the concern for their

privacy is a major issue. It is a given that monitoring Internet activity is important. However, it is also essential that parents must provide enough privacy to their children. If a child is feeling that their online privacy is not being ensured, they can start to hide things from their parents. This can also lead to a sense of distrust in young children.

To ensure that you do not breach your child's privacy while monitoring their online activity, make sure to communicate with them. It is always important to let your child know that you are only looking out for their safety and are not trying to control their interactions with people. Additionally, educating children about the various issues they can face online will also give them a better understanding of them. Other than that, you can also set up rules for using the Internet in your home. Communicate these rules with your children so that they can understand what they should or should not do while being online.

Conclusion

There are multiple safety reasons why parents must monitor the online activity of their children. Since younger users are not very aware of the threats that they can face online, monitoring their online activity can help parents avoid any unfortunate incidents. It is also better for parents to educate young children about these threats so that they can report any suspicious activities to their parents. This will not only ensure the safety of young children but they will be more equipped to access the Internet safely

M.Dhamodhar(19FH1A0541)
IV-II CSE Department

The Impact of AI In Social Media Marketing

A.E Raju (Assistant Professor)

Artificial intelligence (AI) is the term used to describe the emulation of human intellectual functions by machines, such as learning, self-correction, and reasoning. Several industries, including social media marketing, are being transformed by AI. The Impact of AI in social media marketing is huge and we will uncover it in this article.

The term “social media marketing” (SMM) implies the use of social media websites to advertise a brand, product, or service. It entails producing material for social media platforms, sharing it there, interacting with followers, and examining social media metrics.



Image Source: iStock

Current State of AI in SMM

Currently, AI is being used extensively in SMM. AI algorithms are used to analyse social media data and generate insights that can be used to optimize SMM strategies. AI-powered chatbots

are being utilized to provide customer service on social media platforms, while AI-generated content is being used to create personalized content for social media users.

Social media platforms are also using AI to improve user experience. For instance, Facebook uses AI to curate users’ newsfeeds and suggest friends to connect with. Instagram uses AI to recommend posts and accounts for users to follow.

Moreover, AI is being used to improve social media advertising. AI algorithms are used to target ads to specific demographics and optimize ad placement. It is also being used to analyse social media metrics and generate reports that can be used to improve social media advertising strategies.

Hence, AI is currently being used extensively in social media marketing and has a significant impact on the industry. As AI technology continues to advance, we can expect to see even more innovative AI applications in SMM. Read more on the Impact of AI on our daily life.

How is AI Impacting Social Media Marketing?

AI is having a profound impact on SMM. By leveraging the power of AI, social media marketers can analyse vast amounts of data and gain valuable insights that can be used to optimize marketing strategies. It is also being used to create personalized content for social media users, provide customer service, and improve user experience.

One of the key benefits of utilizing AI in SMM is the capability to target ads to specific demographics. Its algorithms can analyse user data to determine which users are most likely to engage with a particular ad and then target the advertisement to those users. This can result in higher engagement rates and more effective advertising campaigns.

Another benefit of using AI technology in SMM is the ability to automate tasks such as content creation, scheduling, and analysis.

This allows social media marketers to focus on more strategic tasks, such as developing marketing strategies and building customer relationships.

There are many successful examples of AI-powered SMM campaigns. For instance, Coca-Cola used AI to analyse social media conversations and identify trending topics, allowing them to create personalized content that resonated with its target audience. Similarly, Sephora used AI-powered chatbots to provide customized product recommendations and improve customer service.

AI Tools for Social Media Marketing

Various AI tools and platforms available for SMM can help marketers optimize their strategies and improve performance. These tools utilize machine learning algorithms to analyse data, identify patterns, and provide valuable insights that can inform marketing decisions.

One of the most common AI tools for social media marketing is social listening software, which allows marketers to monitor social media conversations about their brand, products, and industry. This helps them understand their audience and identify opportunities for engagement and growth.

Another popular AI tool is chatbots, which use natural language processing (NLP) algorithms to provide automated customer service on social media platforms. Chatbots can answer frequently asked questions, deliver product recommendations, and even make sales. Read about the recent famous chatbot Catgut.

AI-powered analytics platforms are also increasingly popular in SMM. These platforms utilize machine learning algorithms to analyse data from social media platforms, providing insights into user behaviour,

engagement rates, and more. This can help marketers optimize their content and targeting strategies to improve performance.

AI is also being used to create personalized content for social media users. For example, some platforms use NLP algorithms to analyse user behaviour and create personalized product recommendations.

Many AI Courses and programs are available for marketers looking to learn more about these tools and platforms. These courses cover topics like machine learning, NLP, and data analytics and can provide valuable insights into how AI can be used to improve social media marketing strategies.

Ethical Considerations of AI Technology in Social Media Marketing

As with any technology, using AI in social media marketing raises ethical considerations. AI can collect vast amounts of data about individuals, potentially targeting them with personalized ads or manipulating their behaviour.

Marketers must use AI responsibly and transparently, respecting individuals' privacy and rights. This means being clear about what data is being collected, how it's being used, and allowing individuals to opt-out if they wish.

In addition, companies should ensure that their AI algorithms are not biased or discriminatory and regularly audit and monitor their use of AI to ensure it aligns with ethical guidelines and standards.

By using AI ethically and responsibly, marketers can reap the benefits of this technology while ensuring that individuals' rights and privacy are protected.

Future of AI in Social Media Marketing

The future of AI technology in social media marketing is promising. As Artificial Intelligence technology continues to evolve, it will profoundly impact how marketers approach social media marketing. The potential advancements and breakthroughs in AI technology for social media marketing are vast and varied.

One potential advancement is the use of AI-powered chatbots. Many businesses are already using chatbots to handle customer service inquiries on social media platforms. However, with AI technology, chatbots will become even more advanced, providing personalized responses and enhancing the customer experience.

Another potential breakthrough is using AI to create hyper-targeted social media ads. By analysing data from social media platforms and other sources, AI algorithms can create highly targeted ads that are more likely to resonate with specific audiences.

AI may also lead to the development of more sophisticated social media listening tools. These tools can analyse conversations on social media platforms and provide insights into customer behaviour, preferences, and trends.

Overall, the future of AI in social media marketing is bright. As AI technology evolves, it will provide marketers with new and creative ways to engage with their target audiences.

Other Articles on AI:

Is Artificial Intelligence a Threat or a Benefit?
How AI Technology Can Help You Optimize Your Marketing

Artificial Intelligence: Technology that Hosts Race between Enterprises

Top 10 Ways Artificial Intelligence Future

Will Change the World

Wrapping Up

AI has significantly impacted social media marketing by providing advanced tools and platforms that efficiently analyse user data and create targeted campaigns. AI also offers opportunities for automation and personalization, enabling marketers to get their target audience more effectively. However, there are ethical considerations to keep in mind when using AI technology in social media marketing, such as the potential for bias and the importance of protecting user privacy.

To stay ahead in this ever-evolving field, social media marketers must stay informed about the latest AI advancements and learn how to use them effectively. Artificial Intelligence courses can provide the necessary knowledge and skills to leverage AI in social media marketing while ensuring ethical and responsible use. Therefore, investing in AI education is crucial for social media marketers to thrive in the future.

The Technology behind Face Unlocking in Smartphones

K. Samson Paul (Assistant Professor)

What is Facial Recognition Technology?

Facial recognition technology is a part of biometric technology that identifies a person by face. It is also described as Biometric Artificial Intelligence, which is used to capture a person's facial texture and facial recognition such as eye retina, nose, and face shape. It is used for facial recognition in videos, photos, or real-time. Facial Recognition has been a great help for the security department to identify criminals based on the video footage.

Read developments about 5G wireless Technology and what measures to take to prevent cybercrime.

Which Face Unlocking Technology is used in Smartphones?

Android Basic Facial Technology: Android operating system introduced face unlocking from its "Ice Cream Sandwich" version (Android 4.0) in 2011. The main drawback of this face unlocking technique was that it used to store only 2D images so it was very easy for someone or a thief to fool the system and unlock the phone easily. As this technique was not fully efficient so users used this option along with a PIN or password. Surprisingly Google has discontinued the face unlock feature with the Android 10 release due to security reasons..



Recent Nokia phones were using Android face unlocking

Samsung Iris Technology: Iris scanner in the Samsung device works based on the retina of eyes, just as human fingerprints are unique, the retina of the eye is also unique and no one can copy it. Samsung launched the Iris technology in its flagship devices Galaxy Tab Iris, Galaxy S7, and S7 Edge. Because earlier a normal front-facing camera could not scan the retina of the eye, Samsung gave a special infrared narrow-focus camera to its flagship smartphone so that it could easily scan the retina of the eye. One disadvantage of the Iris technology is that it generally requires close proximity to the camera, which can cause discomfort to the eyes for some



Samsung Iris Technology

Apple Face ID: Face ID is a type of facial recognition technology that the Apple company has designed and developed and started using in iPhone X, XS MAX, and iPad Pro (3rd & 4th Gen.) After introducing 3D facial recognition technology in 2017, Apple has continued using it in all new iPhone and iPad. With the face ID introduction, Apple decided to discontinue the other biometric authentication, touch ID from 2017 in iPhones and iPads.

Here's how to set up Face ID:

Tap Settings

Tap Face ID & Passcode

Enter the Passcode (if prompted)

Tap Enrol Face (Under Face ID)

Tap 'Get Started' & follow the on-screen prompts

You will be asked to position your face within the frame

Move your head around so that it is scanned from all the angles

When setting up Face ID, you'll need to move your head around slowly so that Face ID can fully recognize your face. The setup process

will take two scans of your face and then that's it.



Which Face Unlocking Technology is Better?

The Face unlocking biometric was introduced in 2016 with the Samsung Galaxy Note 7 whereas Apple first introduced Face ID in its iPhone X in 2017.

Apple Face ID technology is more promising with its accuracy and security and also it is based on a 3D facial recognition sensor. It is also capable of scanning the face even in the dark. This sensor consists of 3 parts, the first is the Dot Projector module, in which an infrared dot pattern is made on the face of the user, and the second module is the flood illuminator that is responsible to read the infrared patterns and generating a 3D facial map. The third module is an infrared camera that takes an infrared picture of these patterns. These patterns are encrypted and sent to a local Secure Enclave in the CPU of the device to match the registered face. If a user performs an unsuccessful scan 5 times, the Face ID becomes disabled for 48 hours. Also, Apple has claimed that 1 person out of 10,00,000 is likely to unlock the phone by another person with

Face ID while 1 in 50,000 is likely to be in Touch ID. In addition, the Face ID system can easily recognize the face even when wearing makeup, hats, scarves, and glasses, and also it can adapt to the age factor of a person.

Conclusion:

Facial recognition technology has been in use for the past few years. With the improvements in security and speed, technology is evolving slowly to newer heights. The future could move towards free walks through doors so that the technology would detect faces and allow entries automatically. Some people believe that even today's password and PIN are better and safer than face technology because it is a bit difficult to crack the password. Each authentication method has its own advantages and disadvantages. One place, where facial recognition can stand out from other biometrics is online authentication during conferences or video-enabled meetings where mainly face is scanned and authentication is done on a larger scale. Facial recognition still has a long path to ride on. We will keep you posted.

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