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Deep Tech Startup

- Those startups whose business model is based on high tech innovation in engineering or significant scientific advances.
Ex, AI, Remote sensing, robotics, biotechnology.
- Deep tech or hard tech startups are companies that develop engineering and scientific innovations to solve complex real-world problems.
- The chance of failure in deep tech startups is more as compare to others that's why many unicorns and it's founders are not ~~support~~ invest in deep tech startups.

⇒ Deep tech startups in India:-

- There are 3000+ deep tech startups in India but in India there are 100+ unicorns in India but there is not even ~~one~~ one deep tech startup among them.
- India is a third-largest startup ecosystem in the world after China and US. But only 1% of them are deep tech startups.

• Nasscom's and 'DeepTech Club' program is mentoring deep tech startups in India.

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• IIT Madras is also mentoring science-based deep tech startups the 'I-NUVATE' program.

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→ India's DeepTech pie.

Business Today.in

No. of Startups

→ 6.

A.I → 1900+

Big data and analytics → 570+

Internet of things → 560+

Blockchain → 290+

AR and VR → 210+

⇒ Advantage of deep tech Startups :-

1 → solve real world problems.

2 → creates new industries.

3 → fosters innovation.

4 → Encourage Investments.

Deepfake Technology

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- Deepfakes are videos created using deep-learning artificial intelligence to replace one person with another.

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Advantages

- This technology can be used to make education more entertaining.
 - Realistic special effects.
 - It can be used to create people who do not exist.
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- It's ability to create false information about any person.
 - It can be misused to create realistic fake videos that can show that a person is doing a crime.
 - In Russia and Ukraine war fake videos was circulated.

⇒ only a few countries have laws
on this new technology.

⇒ In India, IPC section 500
can be used as punishment for
defamation. 674 67A of the Information
Act, 2000 can also be used for
this purpose.

Android VS IOS

→ Android and IOS are operating systems used in smartphones and tablets. The android OS is used by many smartphone manufacturers including Samsung, Redmi, whereas IOS is used in iPhones.

=>

Parameters	Android	iOS
• Price	Cheaper than iOS devices	More expensive than most Android devices
• 3rd-party app stores	There is no restriction on using 3rd-party software	No 3rd party is allowed, and that's why IOS is more secure.
• source model	It is open source	It is commercial but is built on open source component
• languages	Availability in over 100 languages	Available in 30+ languages only.

Customer loyalty.	About 91% of customers are loyal to android	About 86% of customers are loyal to IOS.
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- ⇒ Android was founded by Android Inc, a startup firm in Palo Alto, in 2003. By 2005, Google had acquired the firm.
- ⇒ Android has come a long way from version 1.0 in 2008.
- ⇒ The first version of IOS was released in 2007. 1

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Metaverse

→ In Metaverse, people can interact with each other using virtual and augmented reality technologies. It will result in forming the shared virtual world.

- we can shop, play games buy things and own places in the metaverse.
- Many companies are creating gaming metaverses. The 'second life' game which was launched in 2003 can be stated as an earlier version of the metaverse.

→ Benefits

- It will also help peoples with special needs.
- It can also be used as a treatment method to cure phobias.

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ChatGPT

ChatGPT, which was launched by OpenAI in November³⁰ 2022, is considered the best AI chatbot ever released.

- ChatGPT is an AI chatbot. It answers our questions like humans.
- It is based on the GPT-3.5 language model.
- ChatGPT is also being used as a help by coders and writers with basic things.

⇒ Advantages :-

- 1- Versatility:-> ChatGPT can converse
- 2- Accessibility:-> It's available 24x7 and can handle multiple conversations simultaneously.

3-> Scalability:

4-> Continuous Learning:

Disadvantages :-

- 1-> Lack of Emotional understanding.
- 2-> security and Privacy concerns: There are risks associated with sharing sensitive information with AI models.

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Data Localisation

- Data localisation refers to the process of physical storage of data within the national boundaries of the country.
- At the 14th G20 summit, which was held in June 2019, India backed data localisation laws.
- Data Localisation means storing the data within the territorial boundaries of the country.

⇒ Pros of data localisation:-

- Data security :- One of the main advantage of data localisation is that it can enhance the security of data by keeping it within the border of a particular country.
- Data privacy:-
- Economic considerations :- Data localisation can also have economic benefits, such as the creation of local jobs and the stimulation of economic growth.

Improved performance:- Data localization can also improve the performance of certain services, such as online applications and websites, by keeping data closer to users.

Cons of data localization:

Cost:- One of the main challenges of data localization is the cost involved in implementing it.

Complexity:- Data localization can also be complex to implement, particularly if it involves transferring data between different locations or complying with multiple laws.

Limited access:- Data localization can also limit access to data, as it may not be easily accessible to users or businesses located outside the country in which it is stored.

Tariff barriers:

Q) Is Technology making us less human?

- Since the invention of machines, there are debates on whether technological innovations are affecting human behaviour, our lives now revolve around technology devices. Social scientists observed that this is resulting in the deterioration of human qualities such as morality and intelligence in humans.

⇒ Yes it is

- we are increasingly depending on technological devices to guide us. For example, we keep reminders on smart phones and google the questions for answers. we are outsourcing the activities that require intelligence to technology.
- Many face to face communications are also replaced with virtual interactions. Many people are now living in virtual homes, which is the smartphone.
- Our decision-making skills are also getting affected as we are now asking search

engine to know what is best. we are depending on the knowledge base of the internet even at offices to finish our work at hand.

- Dependence on technology is affecting our morality, our system of values and principles that decide which is right and which is wrong.
- workers are forced to work ~~continuously~~ along with the machine.

⇒ NO. technoBnot!

- Using technology, people are maintaining and improving relationships with their friends, family and relatives.
- Many companies are now adding elements to work culture with the help of technology to make employees feel important.
- Technology is just a tool. How we use it depends on us completely.

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online gaming: advantage and disadvantage.

→ Pros:-

parental exercise:

- 1- Brain Booster: Many parents think online games make their kid's brains dull and inactive. But in reality, it is the opposite.
- 2- Improves concentration: If you want to win any games, you need to be focused on the game. Your brain starts to function quickly while concentrating on the video game.
- 3- Improves vision: online games can improve your vision only if you play games for hours only.

4- Improve teamwork skills-

5- Helps to reduce depression, Anxiety and Stress:-

If you have depression or anxiety, you can take the help of non-violent online games to reduce depression, anxiety, and stress.

=> Disadvantages of game:

1- Addiction: Video games are addictive if you keep playing them without any break. If you do not have self-control over video games, you might get addicted to the game.

2- Some games contain violence: All the games are not same; games have different genres, some are educational and some contain lots of violence.

3- Health problem: Few games require you to get physically involved.

4. Might Limit Academic progress.

Once your kid gets addicted to online gaming, they prefer gaming over their studies.

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IT Industry

IT is a market segment whose product and services focus on using technology to solve business problems.

- The top three Indian IT companies TCS, Wipro and Infosys, were expected to offer 1.05 lakh job in 2022 due to increasing demand for talent and skill.
- India's IT and business services market is projected to reach ~~\$ 18.93 billion~~ \$ 19.93 billion by 2025.
- ⇒ Many organizations will have a presence in multiple segments.
- 1 ⇒ Product companies: They are companies that work on products

meant to serve a specific use
for a customer.

2. Service Organization: These organizations provide IT services to their customers.

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Drone technology- Pros & cons

- Drones are flying devices which can be controlled using a remote or smartphone.
- The earliest version of drone used in 1899.
- Some time ago drones was used for only Military purpose.
- But now drones are used for various purpose.

=> Pros of drone technology:-

1- Accessing in inaccessible places:-

Many places where we can't go easily but drone can easily go and also capture the information.

2- Drones can save lives:-, Drones can also used for food delivery etc in hill areas.

and find peoples.

3- Drones can be used in agriculture:-

7- \rightarrow Decrease the workload of ~~the~~ people.

8- \rightarrow Used for military purpose.

\Rightarrow Cons of drone:-

1: Hacking: easily hacked.

2- \rightarrow collide with flights.

3- \rightarrow Drone can misund.

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Digital India

- "Digital India" was launched in July 2015 by the government of India. This is started with the aim to achieve more interconnected goals. They are;
- Availability of high-speed Internet:
- To make all government services accessible to the common man through E-governance.
- Digital empowerment of citizens.

Achievements:-

- No. of internet users increased to over 900 million in 2022, making India the second largest online market in the world behind China.
- The Indian government is promoting content in local languages on the Internet.

- DigitLocker launched in 2015 enables citizens to securely store and share documents.
- UMANG app was launched to drive mobile governance in India.
- The Indian government has installed free public wifi hotspots in many public places
- Sri services will be launched in India by 12 October.
- All central ministers are present on social media and are utilizing social media to receive complaints and feedback from citizens

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Digital privacy

- Digital privacy means the protection of the personal information of individuals who use digital mediums.

→ Points :

- We provide our personal information to many apps and websites mostly to use their services.
Ex food delivery apps
- In general, personal information is used to target us for advertisements.
- There are several incidents, where data breaches occurred revealing the personal information of many people.
- Companies should invest more in protecting users from data breach.

*→ways to secure Data :-

- Always use a unique password for all login portals.
- Do not allow all the permission to the app while installing it.
- Make sure not to download and install an app from a third-party portal.
- Every 24 hours, clear the cache from your browser.
- Make sure you have turned off the "save password" feature in the browser.

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Science is boon or bane

→ Today, I want to tell whether science is a boon or bane.

First, I would like to say that science is a boon as well as a bane depending upon how we use it.

→ "for boon":

- Science is an essential part of human life for many things like PLC, computer, Internet, mobile, etc.

- Science is also helped a lot to farmers in the invention of new machines.

→ "for bane":

- Science is a bane because in world war people discovered many nuclear weapons and dangerous weapons which destroyed the world.

• The biggest disadvantage of silence
is related to the use of Internet
by terrorists to spread their
messages.

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Cyber crime and

Cyber crime :-

- Any crime that is committed by using computer and internet network is a cyber crime.
- Around 11,592 cases of cyber crimes were reported across India in 2015, the number is 26 folds more than the cases reported in 2006 amounting 453 cases.

→ Most of the cyber crimes are:-

- Fraud and financial crimes.
- Cyber terrorism
- False-flagging
- Cyber extortion

causes :-

- Common people do not have much awareness about methods of cyber crimes. This is biggest advantage for criminals.

- Financial gain was one biggest motivation for cyber crimes.

Effects :-

- Leakage of important information.
- False online lottery and job claims damage the economic condition.

Cybersecurity

It is the process of protecting and recovering computer system, network, devices, and programs from any type of cyber attack.

Advantage :-

- Protects personal data
- Enhances productivity
- Better data management
- Improve cyber posture

disadv.:

- Regular updates
- Needs continuous learning.
- complex to setup.
- slower systems
- Expensive.