



Delhi Technical Campus

Affiliated to GGSIP University, New Delhi • Approved by AICTE & Council of Architecture



Department of
Computer Science & Engineering

Presents

INCEPTA 2024

A Technical event on
Open Source, AI, and
Entrepreneurship.

Auditorium,
Delhi Technical Campus
4 September 2024

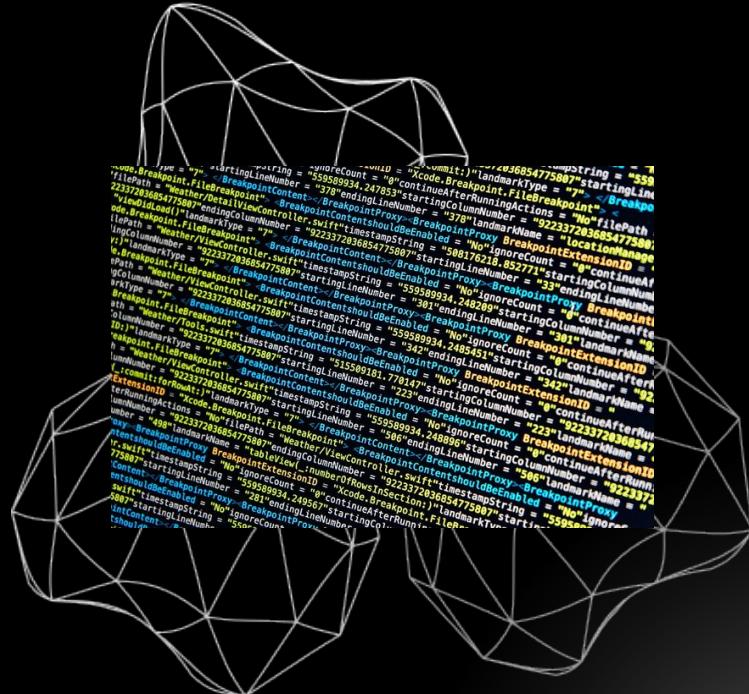
» Adviced to bring your Laptops

OPEN SOURCE SOFTWARE

PRESENTATION

SOFTWARE

Software plays a crucial role in daily life, enabling tasks like communication, work, and entertainment. Popular software includes Microsoft Office for productivity, Google Chrome for web browsing, and social media apps like Facebook and Instagram for connection. These tools simplify complex tasks, enhance efficiency, and keep people connected globally.





ANDROID APP ON
Google™ play



Download on the
App Store

FREE SOFTWARE

These days, most of the software we use, we are able to get free of any charge. So even while tools such as Adobe suite remain paywalled, most tools offered by the biggest tech companies are the world are provided to the end user free of charge.

Well, how can they do it? How can Meta give away such powerfull services as Instagram and Facebook without charging for their use?

“FREE” SOFTWARE

As you all may know, this is only possible because these services serve advertisements, that doesn't sound so bad. However the problem arises when you remember that on any platform you aren't being sold something,

You are the product being sold.

Everything from your name, race, gender, sexuality, history, preferences and what not are present on a server you don't even remember connecting to.



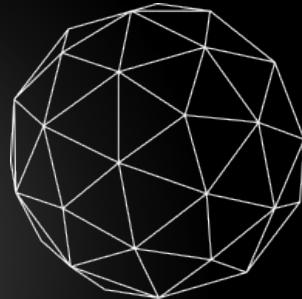
FREE SOFTWARE



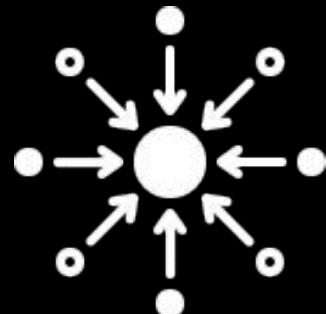
FOSS, or **Free and Open Source Software**, is software that gives users the freedom to share, study, and modify it. This freedom allows for security, flexibility, and transparency.

- **Security:** FOSS is often more secure than proprietary software, thanks to a community that can quickly identify and fix vulnerabilities.
- **Flexibility:** Free software can be customized to meet specific needs.
- **Transparency:** The freely available source code allows anyone to inspect and verify the software's safety and security.

DEVELOPMENT DISTRIBUTED



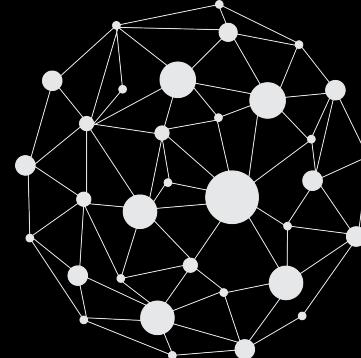
Open source



Centralized



Decentralized



Distributed

WHAT KEEPS IT FREE?

GPL
AGPL
LGPL



EPL
MPL
etc

THANK YOU

AND MORE TO COME

“The Times 03/Jan/2009 Chancellor on brink of second bailout for banks.”



★ STORIES OF BLOCKCHAIN

“If crypto succeeds, it's not because it empowers better people. It's because it empowers better institutions.” - Vitalik Buterin

@gulshanpr



developing Applications on blockchain for more than 1.5
years.

For the sake of making applications secure and decentralised.

WHY TO LISTEN ME?

1

Vibe-Check dApp is a blockchain platform where users earn "Aura Points" and "Vibe Tags" to determine their "Gyaat Levels." It includes a marketplace for trading these items, a leaderboard, and an XMTP chat interface. Check it out at:
<https://github.com/gulshanpr/vibe-check>.

2

Staked Habit is a gamified platform where users stake tokens to commit to daily habits. Users earn rewards based on lines of code and daily commits, with a leaderboard for friendly competition. Visit <https://github.com/gulshanpr/staked-habit> for more details.

3

A Valentine-themed NFT minter app on GitHub offers an interactive experience by minting unique NFTs when users select "Yes." The app changes state when "No" is chosen, adding a playful twist to the minting process. Visit <https://github.com/gulshanpr/nft>



WEB1.0 VS WEB2.0 VS WEB3.0



- Web1.0 (1989 - 2004): Read-only data, no interactivity.
- Web2.0 (2004 - 2010): Read-only and can write, privacy issue, not trustless, censorship and centralisation, anything today.
- Web3.0 (2010 - Present): Everything web2.0 + better control over your data



BLOCKCHAIN'S TIMELINE

- Bitcoin (January 3, 2009): Satoshi Nakamoto, peer to peer cash system, only supports money transfer
- Ethereum (July 30, 2015): Vitalik Buterin, everything bitcoin + decentralized applications and smart contracts
- OmiseGO (2017): First Layer 2 of Ethereum, everything Ethereum + solve the existing problem

LIL DEMO



<https://wallet-creation-demo.vercel.app>

WHAT'S NEXT?



For
discussion



Follow me on
X

THANK YOU

LinkedIn basics

TO ADVANCED

Presented by

Nikhil kumar

linkedin.com/in/nlecodaa

WHY LINKEDIN

- Networking Powerhouse: LinkedIn connects you with professionals globally, providing opportunities to expand your network and discover potential job openings.
- Personal Branding: A well-maintained LinkedIn profile showcases your skills, experience, and professional interests, making you visible to recruiters and potential employers.
- Endorsements & Recommendations: These features add credibility to your profile, highlighting your expertise through peer validation.

LINKEDIN VS OTHERS

- Industry-Specific Content: Content is more focused on industry trends, career advice, and technical skills relevant to software development.
- LinkedIn Learning offers access to courses and certifications, which can be displayed on profiles.
- LinkedIn is a common platform for recruiters to seek out candidates with specific skills in development and software engineering.
- Other's content is more varied, ranging from personal updates to memes, which might not always be career-focused.
- Others are primarily used for social interaction rather than professional networking.

SETTING UP YOUR LINKEDIN PROFILE

- Professional Profile Picture: Choose a high-quality, professional-looking photo that reflects your industry standards.
- Compelling Summary: Write a summary that tells your career story, showcases your strengths, and outlines your goals in a way that resonates with your target audience.
- Skills & Endorsements: List relevant skills that align with your career objectives and get endorsements from colleagues to build credibility.
- Custom URL: Personalize your LinkedIn URL to make it easier to share and more professional.

LinkedIn headlines

- Data Scientist: "Data Scientist | Turning Data into Actionable Insights with Advanced Analytics"
- Machine Learning Engineer: "Machine Learning Engineer | Building Predictive Models and AI Systems"
- Backend Developer: "Backend Developer | Architecting Efficient and Scalable Server-Side Solutions"
- Frontend Developer: "Frontend Developer | Creating Engaging and Interactive User Interfaces"
- Cybersecurity Engineer: "Cybersecurity Engineer | Securing Systems and Data with Advanced Protection Strategies"
- Mobile App Developer: "Mobile App Developer | Creating Seamless

HOW TO ASK FOR RECOMMENDATIONS ON LINKEDIN

- Choose the Right People
- Personalize Your Request by mentioning specific skills or projects you'd like them to highlight.
- Don't Overdo by asking too many people at once or sending requests to those you haven't worked closely with, as this may appear insincere.
- Ask people who have directly witnessed or benefited from your skills, ensuring the endorsements are credible.
- Ask people who have directly met on events or benefited from your skills, ensuring the endorsements are credible.

COMMON LINKEDIN MISTAKES TO AVOID

- Incomplete Profile
- Unprofessional Communication
- Neglecting Recommendations and Endorsements
- Overemphasizing Job Titles
- Not being industry specific
- Connecting only with people you know rather than expanding your network strategically
- Overloading Keywords can make it seem spammy and inauthentic.

Thank you!

FORWARD TO BETTER OPPORTUNITIES

Presented by

Nikhil kumar

linkedin.com/in/nlecodaa

CV: YOUR CAREER STORY

A CV (CURRICULUM VITAE) IS A COMPREHENSIVE DOCUMENT THAT SHOWCASES YOUR SKILLS, EXPERIENCE, AND QUALIFICATIONS FOR POTENTIAL EMPLOYERS. IT'S A VITAL TOOL FOR LANDING YOUR DREAM JOB AND HIGHLIGHTING YOUR UNIQUE STRENGTHS.

CV VS. RESUME

CV

LONGER AND MORE DETAILED,
INCLUDING EVERYTHING ABOUT
YOUR CAREER, ACADEMIC
HISTORY, AND RESEARCH.

TYPICALLY USED IN ACADEMIA,
RESEARCH, AND SPECIFIC
PROFESSIONS.

Resume

Concise and focused,
highlighting relevant skills and
experience for a specific job.
Typically used in the private
sector and for entry-level
roles.

FRESHER CV: WHAT TO INCLUDE

ACADEMIC RECORD

HIGHLIGHT YOUR DEGREE, GPA, AND RELEVANT COURSEWORK. EMPHASIZE ACHIEVEMENTS LIKE HONORS OR SCHOLARSHIPS.

Extracurricular Activities

Showcase leadership roles, teamwork experiences, and interests that reflect your personality and dedication.

Skills & Abilities

Focus on transferable skills gained from internships, projects, and volunteer work. Demonstrate your technical skills and proficiency.

Projects & Publications

If applicable, include any academic or personal projects, publications, or presentations that demonstrate your initiative and expertise.

CRAFTING A WINNING CV

- UNDERSTAND THE SPECIFIC JOB REQUIREMENTS AND TAILOR YOUR CV ACCORDINGLY. RESEARCH THE COMPANY AND HIGHLIGHT RELEVANT SKILLS.
- QUANTIFY YOUR ACCOMPLISHMENTS AND USE ACTION VERBS TO DEMONSTRATE IMPACT. FOCUS ON RESULTS AND POSITIVE OUTCOMES.
- ENSURE YOUR CV IS FREE OF TYPOS, GRAMMATICAL ERRORS, AND FORMATTING INCONSISTENCIES. SEEK FEEDBACK FROM TRUSTED SOURCES.
- INCORPORATE RELEVANT KEYWORDS FROM THE JOB DESCRIPTION TO OPTIMIZE YOUR CV FOR APPLICANT TRACKING SYSTEMS (ATS).

CV Formatting & Structure

Header

Your contact information (name, phone number, email, LinkedIn profile)

Summary/Objective

A concise statement highlighting your career goals and key skills.

Experience

Chronological list of your work experience, focusing on relevant responsibilities and achievements.

Education

List of your academic qualifications, including degrees, institutions, and dates.

Skills

A section detailing your technical and soft skills, relevant to the target job.

Awards & Honors

Mention any awards, scholarships, or recognition you have received.

Interests

(Optional) Include personal interests that align with the job or company culture.

TAILORING YOUR CV

- ANALYZE JOB DESCRIPTION**

CAREFULLY REVIEW THE JOB POSTING AND IDENTIFY KEY SKILLS, EXPERIENCE, AND QUALIFICATIONS REQUIRED.

- CUSTOMIZE LANGUAGE**

USE LANGUAGE AND TERMINOLOGY FROM THE JOB DESCRIPTION TO SHOW YOUR UNDERSTANDING OF THE INDUSTRY AND POSITION.

- HIGHLIGHT RELEVANT INFORMATION**

SHOWCASE YOUR SKILLS AND EXPERIENCES THAT DIRECTLY MATCH THE JOB REQUIREMENTS. USE SPECIFIC EXAMPLES TO DEMONSTRATE YOUR ABILITIES.

- PROOFREAD THOROUGHLY**

ENSURE THAT YOUR CV IS TAILORED TO THE SPECIFIC JOB AND ERROR-FREE BEFORE SUBMITTING IT.

CV MISTAKES TO AVOID

- **TYPOS & GRAMMATICAL ERRORS**

PROOFREAD METICULOUSLY FOR TYPOS, SPELLING MISTAKES, AND GRAMMATICAL ERRORS. USE SPELLCHECK AND HAVE SOMEONE REVIEW YOUR CV.

- **UNPROFESSIONAL FORMATTING**

CHOOSE A CLEAN AND PROFESSIONAL FONT. USE CONSISTENT FORMATTING, AND ENSURE YOUR CV IS EASY TO READ AND VISUALLY APPEALING.

- **UNCLEAR OBJECTIVES**

CLEARLY DEFINE YOUR CAREER GOALS AND TARGET POSITIONS. AVOID VAGUE STATEMENTS AND FOCUS ON SPECIFIC ASPIRATIONS.

- **EXAGGERATION OR FALSE INFORMATION**

BE HONEST AND ACCURATE IN YOUR CV. DO NOT EXAGGERATE YOUR EXPERIENCE OR SKILLS, AS IT CAN LEAD TO SERIOUS CONSEQUENCES.

ABC

xxxxxx@gmail.com | +91-8287361306 | [AABBCC](#) | [LinkedIn](#)

EDUCATION

Delhi Technical Campus, Greater Noida, Uttar Pradesh India
B. Tech in Artificial Intelligence and Machine Learning

2022 - 2026
CGPA: 7.03/10

School Of Excellence Dwarka Sec-22, New Delhi, India
CBSE 12TH Grade, Non-Medical Stream

PCT- 81.2%

ACADEMIC PROJECTS

1. Question Paper Builder

Oct 2023- Present

- Developed a tool to effortlessly generate unique question papers from a database of existing questions with my Question Paper Generator. This tool produces multiple papers, each with a distinct set of questions, in editable Word or text formats. Perfect for educators seeking to create diverse assessments without starting from scratch.

Skills- Python, MySQL, Database connectivity, Tkinter GUI, Automation

2. Smart Attendance System

Apr 2024- Present

- Streamline attendance tracking in educational institutions with my innovative Smart Attendance System. Leveraging OpenCV and machine learning, this system swiftly captures and recognizes faces, minimizing time wastage. PostgreSQL database integration enables efficient data recording and management. Additional features include student and course management, plus comprehensive reporting capabilities.

Skills- Machine Learning (ML), Python, Computer Vision, OpenCV, PostgreSQL

3. Two Player Dual

Mar 2022- Present

- A thrilling multiplayer shooter built with Pygame. Take aim and fire to outmaneuver your opponent, with the last player standing declared the victor.

Skills- Python, Pygame, Game Development

ACHIEVEMENTS

• 2nd Place, Intra College Hackathon (Project-based)

Apr 2024

- Developed innovative solutions to real-world problems, demonstrating technical skills and creativity.

• Finalist, Intra College Hackathon (Second appearance)

Oct 2023

- Showcased ability to work under pressure and deliver quality projects in a short timeframe.

• Finalist, Intra College Codeathon (Problem-solving)

Feb 2024

- Demonstrated strong problem-solving skills and coding abilities, advancing to the final round among a competitive pool of participants.

SKILLS

- **Languages:** English (fluent), Hindi (fluent)
- **Programming Languages:** C, C++, Java, Python
- **Databases:** MySQL, PostgreSQL (PSQL)
- **Artificial Intelligence:** Machine Learning, Computer Vision, Text Processing
- **Data Analysis:** Data preprocessing, Data Analysis, Web Scraping

CV CREATION TIPS

- **STRUCTURE & LAYOUT**

USE CLEAR HEADINGS, BULLET POINTS, AND WHITE SPACE TO ENHANCE READABILITY AND ORGANIZATION.

- **KEYWORD OPTIMIZATION**

INCORPORATE RELEVANT KEYWORDS FROM THE JOB DESCRIPTION TO IMPROVE YOUR CHANCES OF GETTING NOTICED BY RECRUITERS.

- **PROFESSIONALISM**

MAINTAIN A PROFESSIONAL TONE, AVOID JARGON, AND ENSURE YOUR CV REFLECTS YOUR BEST QUALITIES.

- **SEEK FEEDBACK**

GET FEEDBACK FROM TRUSTED SOURCES, SUCH AS CAREER COUNSELORS, FRIENDS, OR FAMILY MEMBERS, TO IMPROVE YOUR CV.

Git/GitHub & Basic Linux commands



SERVICE



SOFTWARE

~RAKSHIT MALIK

A colorful circular icon with a gradient from blue to red, containing a white number '1'.

Git

- Git is a version control system that is used to track changes to your files.
- It is a free and open-source software that is available for Windows, macOS, and Linux.
- Remember.
- GIT is a software and can be installed on your computer.

A colorful circular icon with a gradient from blue to red, containing a white number '2'.

GitHub

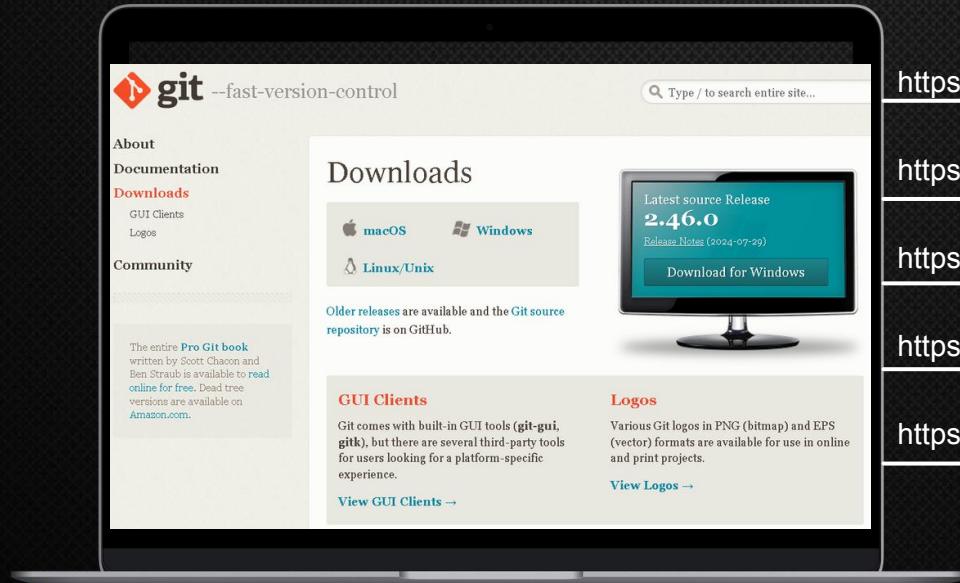
- Github is a web-based hosting service for Git repositories.
- Github is an online platform that allows you to store and share your code with others.
- It is a popular platform for developers to collaborate on projects and to share code.

A colorful circular icon with a gradient from blue to red, containing a white number '3'.

VCS

- Version control systems are used to manage the history of your code.
- They allow you to track changes to your files and to collaborate with others.
- Version control systems are essential for software development.

How to Install Git?



<https://git-scm.com/downloads>

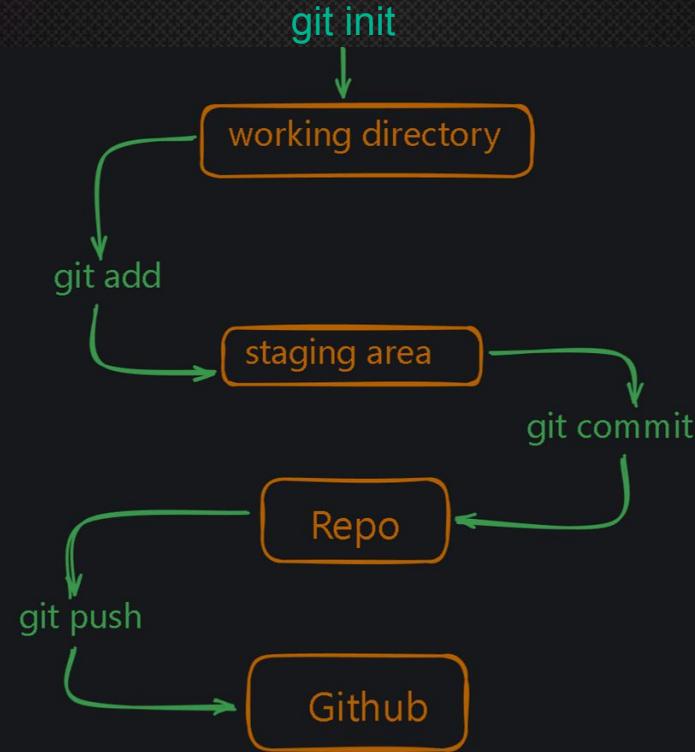
<https://git-scm.com/download/win>

<https://git-scm.com/download/mac>

<https://git-scm.com/download/linux>

<https://git-scm.com/doc>

Complete git flow...



Alternatives of Git

- 1) SCCS (Source Code Control System)
- 2) Subversion (SVN)
- 3) CVS
- 4) Perforce

Alternatives of GitHub

- 1) Gitlab
- 2) Azure Repos
- 3) GitBucket
- 4) SourceForge
- 5) Cloud Source Repositories

Repository

A repository is a collection of files and directories that are stored together. It is a way to store and manage your code.

Logs

>>> git log

This command will show you the history of your repository. It will show you all the commits that were made to the repository. You can use the --oneline flag to show only the commit message. This will make the output more compact and easier to read.

Branches

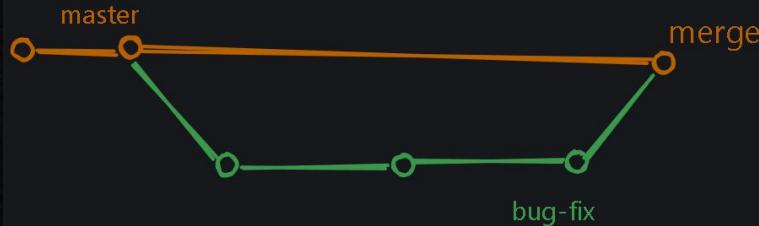


Some points to note:

- `git branch` - This command lists all the branches in the current repository.
- `git branch bug-fix` - This command creates a new branch called `bug-fix`.
- `git switch bug-fix` - This command switches to the `bug-fix` branch.
- `git log` - This command shows the commit history for the current branch.
- `git switch master` - This command switches to the `master` branch.
- `git switch -c dark-mode` - This command creates a new branch called `dark-mode`. The `-c` flag is used to create a new branch.
- `git checkout orange-mode` - This command switches to the `orange-mode` branch.

Conflicts

Fast-forward merge



This is a fast-forward merge. It means that the commits in the bug-fix branch are directly merged into the main branch. This can be useful when you want to merge a branch that has already been pushed to the remote repository.

Some points to note:

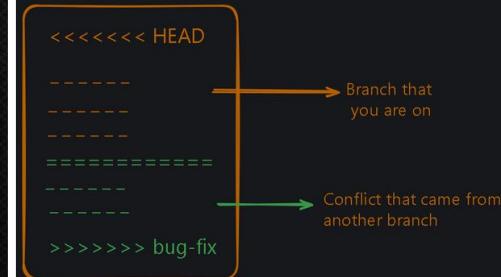
- **git checkout main** - This command switches to the main branch.
- **git merge bug-fix** - This command merges the bug-fix branch into the main branch.

Not fast-forward merge



In this type of merge, the master branch also worked and have some commits that are not in the bug-fix branch.

This is a not fast-forward merge.



VSCode has a built-in merge tool that can help you resolve the conflicts. I personally use VSCode merge tool. Github also has a merge tool that can help you resolve the conflicts but most of the time I handle them in VSCode and it gives me all the options to resolve the conflicts.



Guide to generate a new SSH key and adding it to the ssh-agent...

<https://docs.github.com/en/authentication/connecting-to-github-with-ssh/generating-a-new-ssh-key-and-adding-it-to-the-ssh-agent>

PUSHING CODE INTO GITHUB

```
git remote -v
```

```
git remote add origin <link>
```

```
git push origin main
```

```
git push -u(upstream) origin main
```

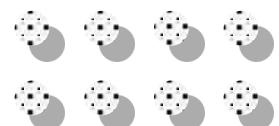
Thank You

HOW TO CONTRIBUTE IN OPEN SOURCE

PRESENTED BY : GAUTAM KUMAR
04 September 2024

Prerequisite Knowledge

- Understanding of at least one language.
- Basic of git.



Find a Repository to contribute

Finding a projects on gitHub is easy and challenging at same time. You need development skill in any tech stack to start contribution in open source.
As per my cal.com ,fastify,tsoa etc.

Finding the perfect Issue

It is first step to start contribution. Go to the issue tab and go for Good first issue. It is beginner friendly and easy to solve issue.

Understand and validate Issue

After finding issue make sure that you understand the issue and validate with yourself it is correct or not. Always to for entire discussion before solving issues.

Fork the Repository

Basic difference between fork and clone.

You do not have access to the original repository.you
need to Fork it to start working on it.

Create relevant branch

Never work directly into the main branch .you need to create new branch for each issue and than start working into your branch.

Test & create PR

Before raising PR always test your changes and make sure it is solved properly.

After satisfaction raise a pull Request of issue.like:-
Bug: bug:#issue_no.

Wait For Maintainer to Merge

Congrats!

Your work is over now wait for maintainer to merge your code to the main branch.

If maintainer add comment to your commit make a healthy discussion and resolve the issue.

Participate In Hackathon

You can also participate in some hackathon where multiples open source company comes as a members.

Like:-

GSoC ,MLH Fellowship, Foss Asia, The LFX Mentorship, Hacktoberfest, Github octernships.

“

THANK YOU!

”

ARTIFICIAL INTELLIGENCE (AI)

AI

AI

AI

ARTIFICIAL INTELLIGENCE (AI)



INTRODUCTION TO AI - ML AND GOOGLE COLLAB

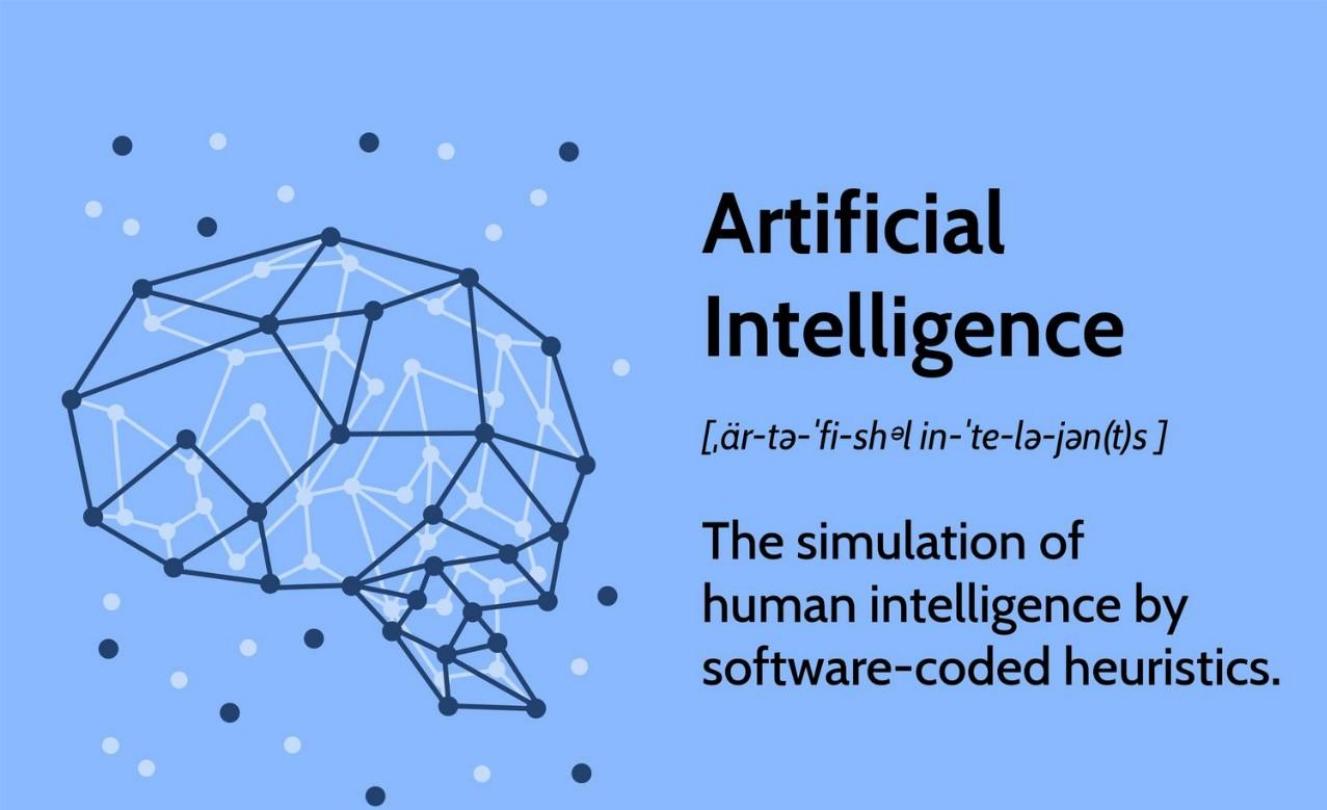
By Pratik Kumar - 2nd year CSE

ARTIFICIAL INTELLIGENCE (AI)



ARTIFICIAL INTELLIGENCE (AI)

ARTIFICIAL INTELLIGENCE (AI)

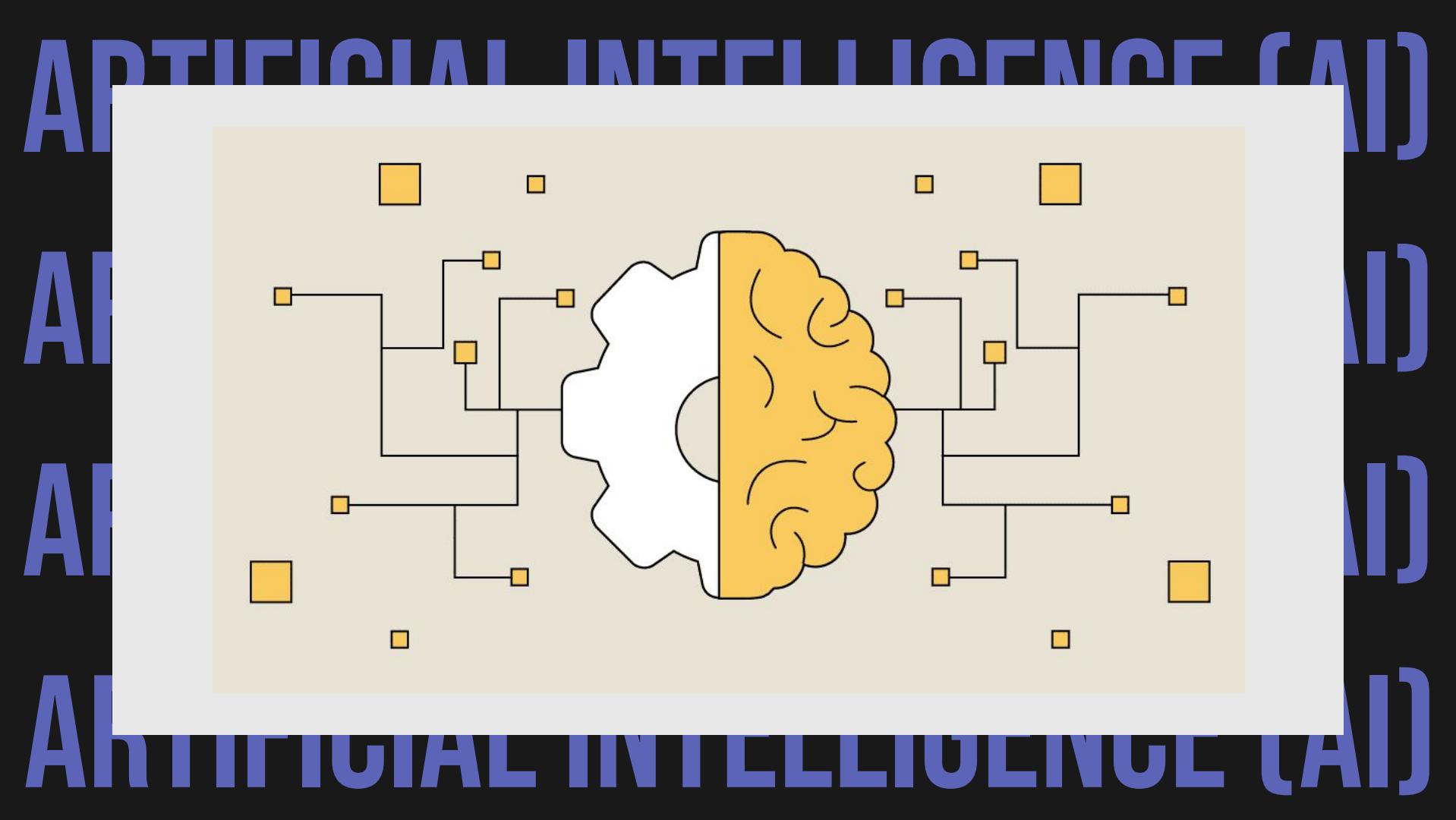


Artificial Intelligence

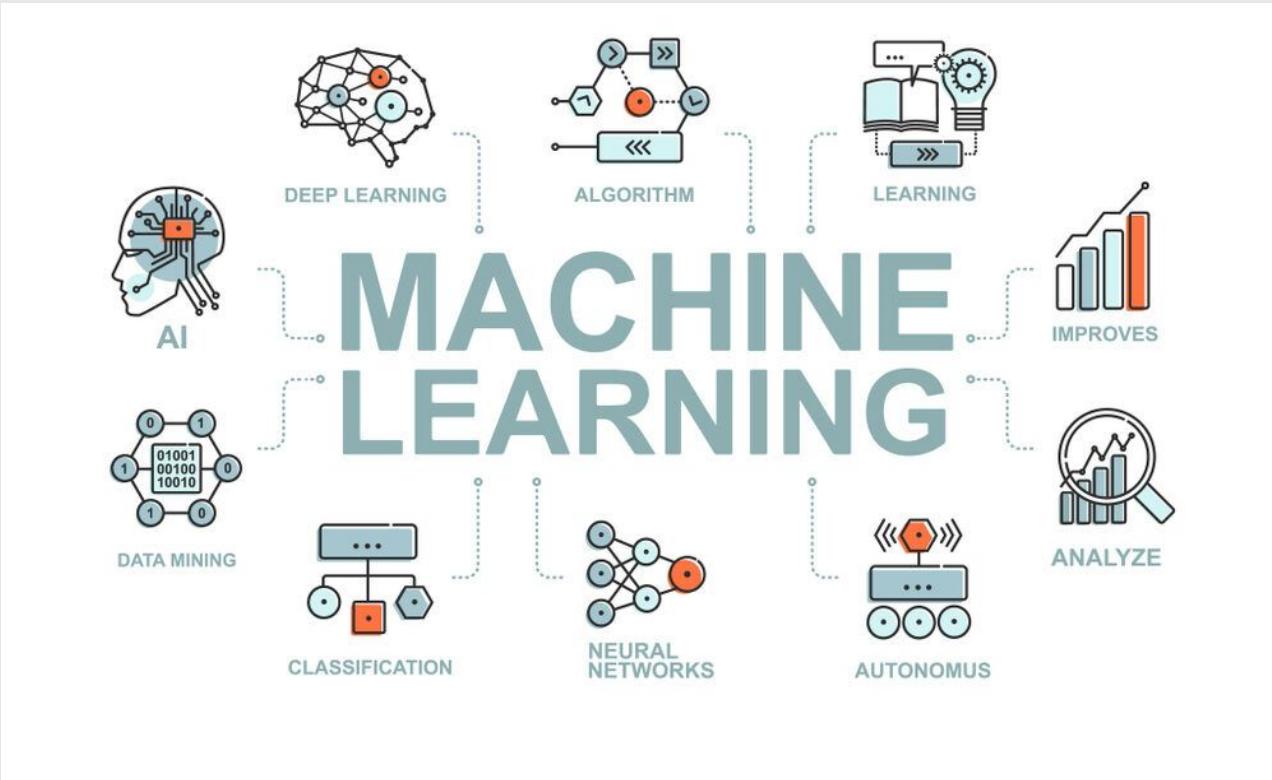
[*är-tə-'fi-shəl in-'te-lə-jən(t)s*]

The simulation of
human intelligence by
software-coded heuristics.

ARTIFICIAL INTELLIGENCE (AI)



ARTIFICIAL INTELLIGENCE (AI)



ARTIFICIAL INTELLIGENCE (AI)

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AI

AI

AI



ARTIFICIAL INTELLIGENCE (AI)

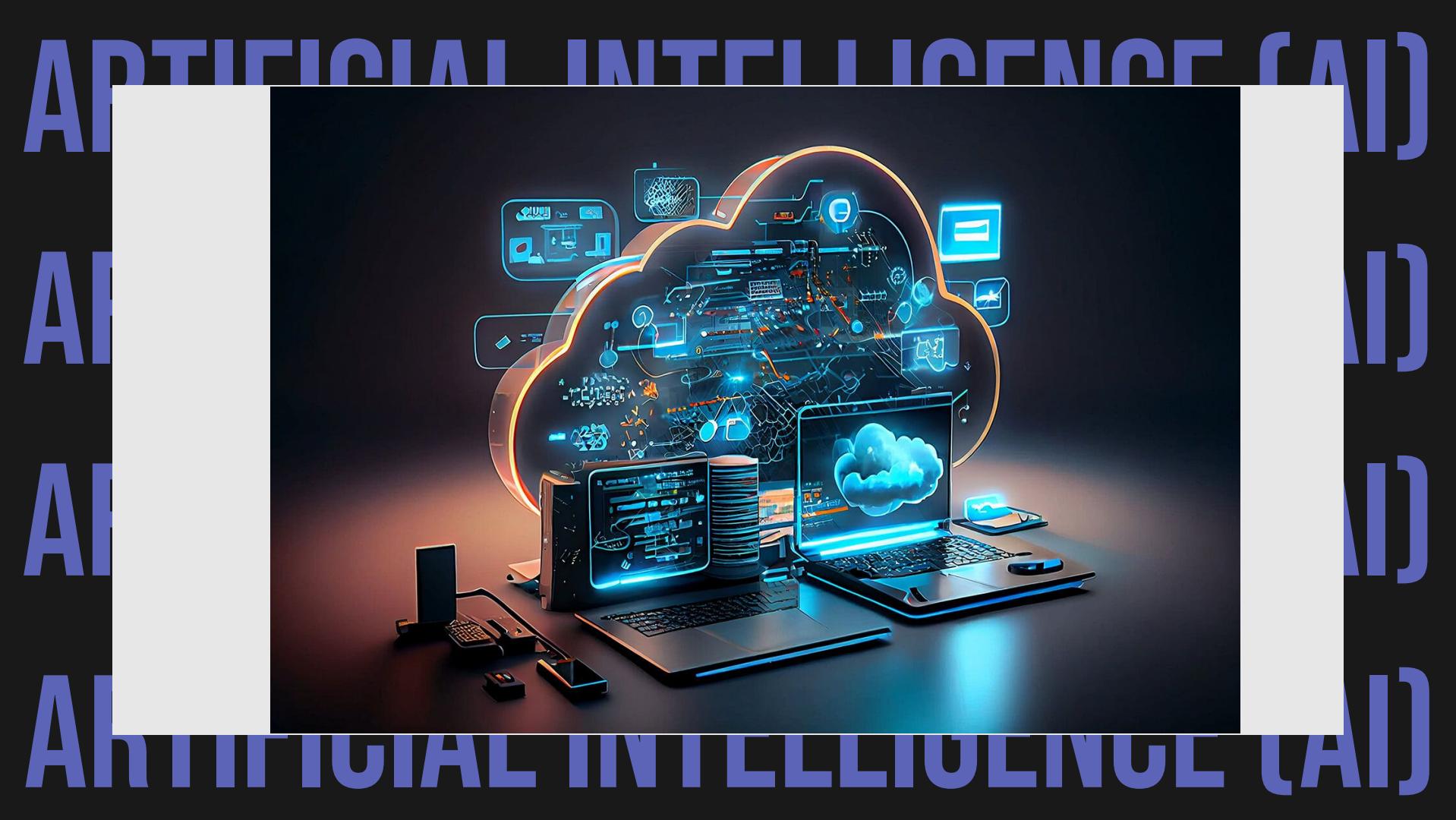
ARTIFICIAL INTELLIGENCE (AI)



Cloud Computing

[klaud kəm-'pyüt-in]

The delivery of different services through the Internet which includes tools and applications like data storage, servers, databases, networking, and software.



ARTIFICIAL INTELLIGENCE (AI)

What is Google Colab?



ARTIFICIAL INTELLIGENCE (AI)

Google



ARTIFICIAL INTELLIGENCE (AI)

ARTIFICIAL INTELLIGENCE (AI)

ARTIFICIAL INTELLIGENCE (AI)



Google Workspace Marketplace



Colaboratory

Install

This allows Google Colaboratory to open and create files in Google Drive. It is automatically installed on first use; uninstalling this will not prevent access to Colaboratory.

By: [Colaboratory team](#)

Listing updated: June 16, 2022

Works with:



★★★★★ 3,484

10,000,000+

Artificial Intelligence (AI)

ARTIFICIAL INTELLIGENCE (AI)



ARTIFICIAL INTELLIGENCE (AI)



The HISTORY OF CHAT GPT

How Ai Learned to talk

By Hilal Ahmad (2nd year AI ML)

>>>

TABLE OF CONTENTS

01.

BRIEF HISTORY OF LLMS

And what is a RNN

02.

1990-2010 (JEFFREY ELMAN)

Word boundaries and
Hierarchical interpretations

03.

2011-2016 (TEXT PREDICTION)

Text Compression and
Prediction

04.

2017 (OPEN AI AND TRANSFORMERS)

Introduction of
Transformer model

05.

TRANSFORMERS MODEL

Here you could describe
the topic of the section

06.

GPT MODELS AND THEIR USES

GPT 1 , 2 , 3

ARTIFICIAL INTELLIGENCE (AI)



01.

Brief history of llms

And what is an RNN



BRIEF HISTORY OF LLMS

THE STORY OF LANGUAGE MODELS BEGINS IN THE MID-1980S, WITH PIONEERING RESEARCHERS EXPLORING THE POTENTIAL OF **NEURAL NETWORKS** TO LEARN AND GENERATE SEQUENCES. IN 1986, MICHAEL I. JORDAN PUBLISHED A SEMINAL PAPER INTRODUCING THE CONCEPT OF RECURRENT NEURAL NETWORKS (RNNs).

JORDAN'S WORK DEMONSTRATED THAT BY ADDING A SET OF MEMORY NEURONS CALLED "STATE UNITS" TO A NETWORK, IT COULD LEARN AND GENERATE SIMPLE SEQUENCES OF SYMBOLS. THIS EARLY EXPERIMENT, WHICH MARKED THE FIRST USE OF STATE UNITS (RNN), LAID THE FOUNDATION FOR THE DEVELOPMENT OF LANGUAGE MODELS.

<<<<

NOW WHAT'S AN RNN?

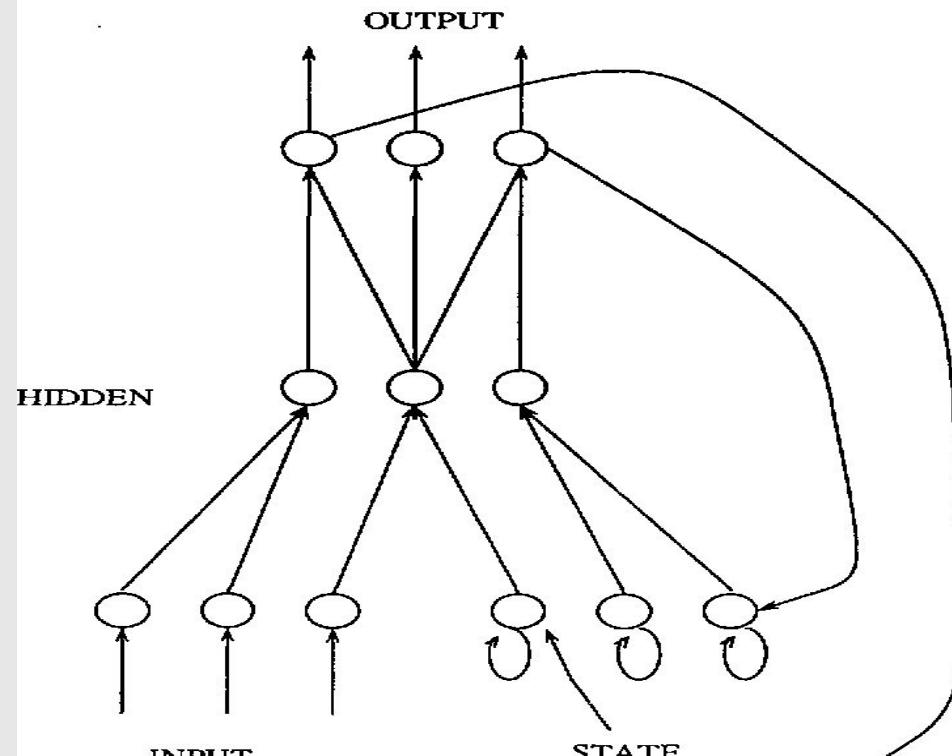
IN HIS INITIAL EXPERIMENTS, HE TRAINED A TINY NETWORK WITH ONLY A HANDFUL OF NEURONS TO PREDICT SIMPLE SEQUENCES OF TWO SYMBOLS.

Finish the pattern



HE ADDED A SET OF MEMORY NEURONS HE CALLED STATE UNITS TO THE SIDE OF THE NETWORK AND ADDED CONNECTIONS FROM THE OUTPUT TO THE STATE UNITS, AND THEN THE STATE UNITS WERE CONNECTED TO THE MIDDLE OF THE NETWORK, AND FINALLY ALSO CONNECTED TO THEMSELVES. THIS RESULTED IN A STATE OF MIND.







02.

1990-2010 (jeffREy elman's STUDY

Word Boundaries and Hierarchical
Interpretations

(A) /

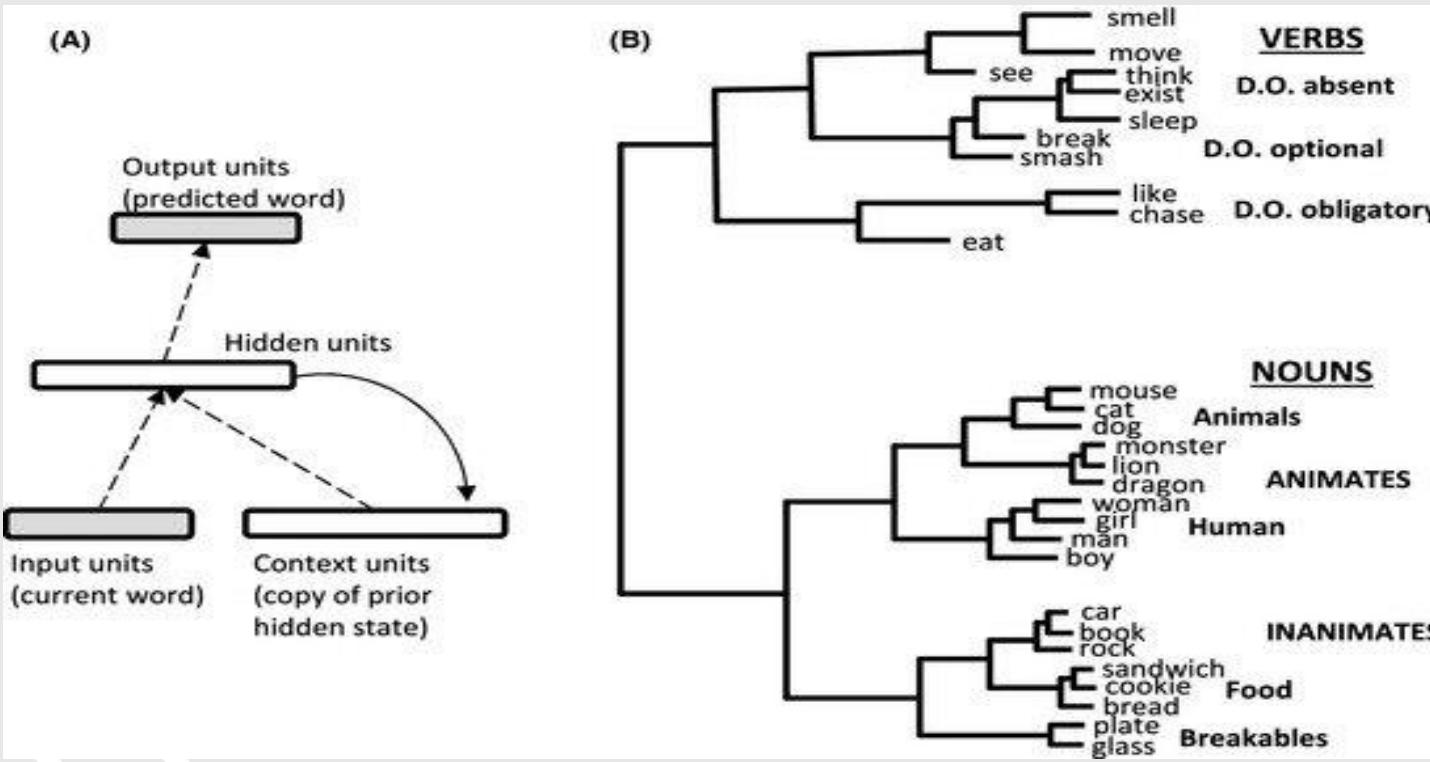
1990-2010 (jeffREy elman's STUDY)

IN 1990 ELMAN PICKED UP ON JORDAN RESEARCH AND TRAINED A SLIGHTLY LARGER NETWORK ON ACTUAL LANGUAGE DATA, USING A COLLECTION OF 200 SHORT SENTENCES.

REMARKABLY, THE NETWORK LEARNED TO **DETECT WORD BOUNDARIES** AND EVEN **CLUSTER WORDS BASED ON THEIR SEMANTIC MEANING**, ANIMATE OBJECTS WERE BROKEN DOWN INTO HUMAN AND NON-HUMAN CLUSTERS. INANIMATE OBJECTS WERE BROKEN DOWN INTO BREAKABLE AND EDIBLE CLUSTERS

<<<<

1990-2010 (jeffREy elman's STUDY)



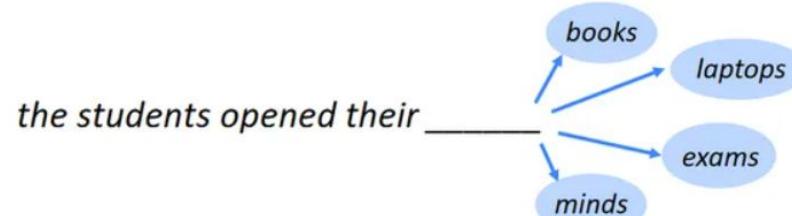
03.

**2011-2016 (TEXT
COMPRESSION/COMPLETION)**

2011-2016 (TEXT COMPRESSION/COMPLETION)

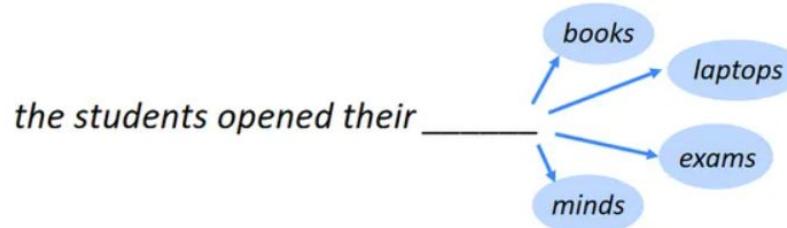
IN 2011 RESEARCHERS PUSHED THIS SPECIFIC EXPERIMENT AHEAD. IT WAS APPLICATION OF TEXT COMPRESSION .
ACHIEVING THE LIMIT IN TEXT COMPRESSION REQUIRES AN UNDERSTANDING THAT IS EQUIVALENT TO
INTELLIGENCE.

THEY TRAINED A MUCH LARGER NETWORK WITH THOUSANDS OF NEURONS AND MILLIONS OF CONNECTIONS
TO
DO NEXT LETTER PREDICTION



2011-2016 (TEXT COMPRESSION/COMPLETION)

THEY GAVE THE PROMPT “THE MEANING OF LIFE IS” AND THE NETWORK RESPONDED “THE TRADITION OF THE ANCIENT HUMAN REPRODUCTION”. BUT BEYOND A FEW WORDS THE PATHWAY OF THOUGHT FELL OFF COURSE AND STARTED WRITING GIBBERISH. SO CLEARLY LEARNING WAS HAPPENING BUT THEY WERE HITTING THE CAPACITY OF THE NETWORK TO MAINTAIN COHERENT CONTEXT OVER LONG SEQUENCES.





04.

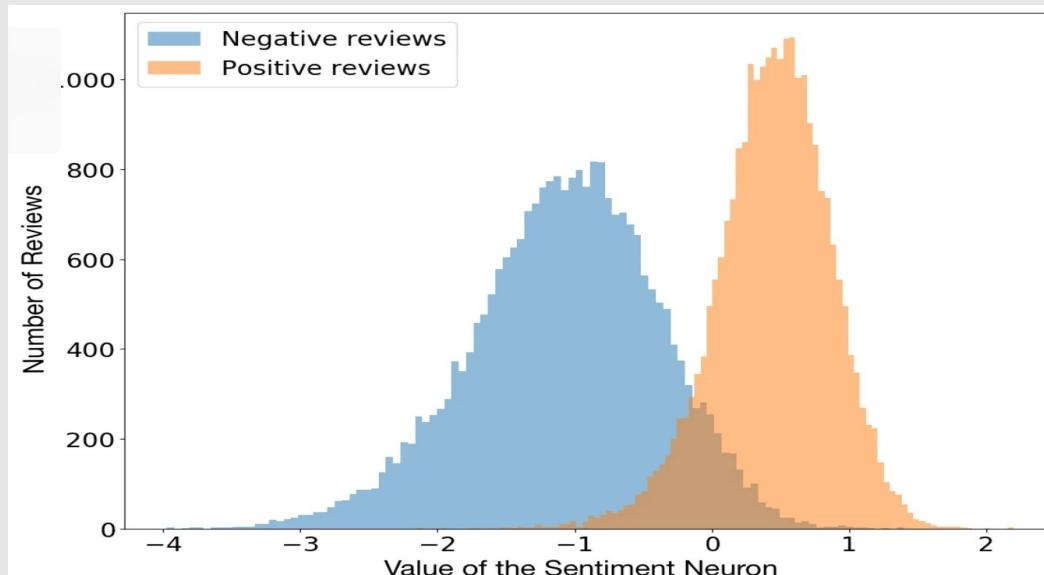
2017 (open ai and transformer model)

Introduction of Transformer Model

(AI) /

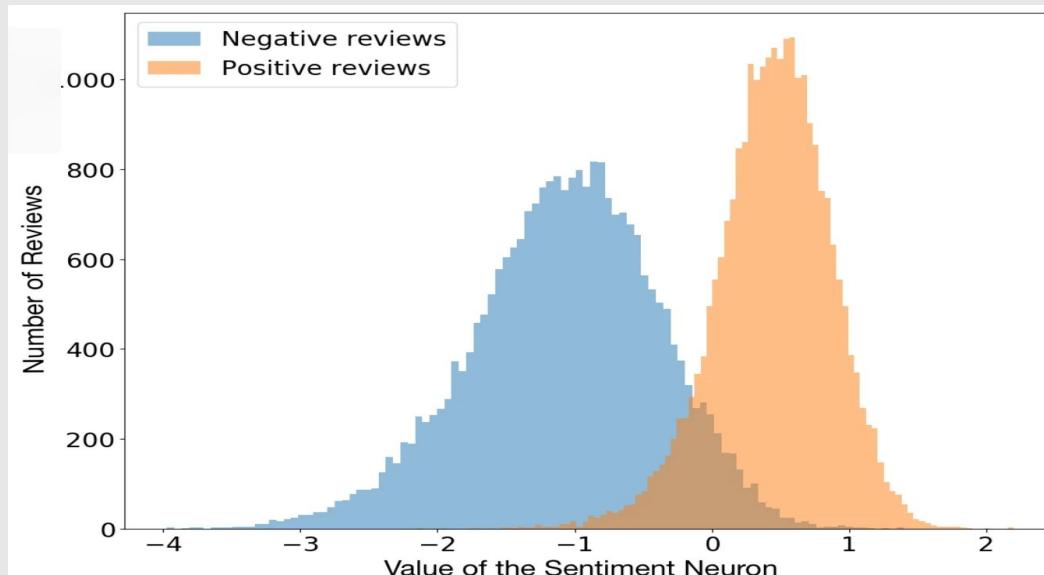
2017 (OPEN AI AND TRANSFORMER MODEL)

AT A LAB CALLED OPENAI SET UP A LARGER RECURRENT NETWORK AND TRAINED IT ON A MASSIVE SET OF 82 MILLION AMAZON REVIEWS. THEY REPORTED THE DISCOVERY OF A **SENTIMENT NEURON** WHICH WAS A SINGLE NEURON WITHIN THE NETWORK THAT DIRECTLY CORRESPONDED TO THE SENTIMENT OF THE TEXT, HOW POSITIVE OR NEGATIVE IT SOUNDED.



2017 (OPEN AI AND TRANSFORMER MODEL)

TO SHOW THAT THIS NETWORK HAD A GOOD INTERNAL MODEL OR UNDERSTANDING OF SENTIMENT, THEY HAD THE NETWORK GENERATE TEXT AND WHILE DOING SO THEY FORCED THAT SENTIMENT NEURON TO BE POSITIVE OR NEGATIVE AND INDISTINGUISHABLE FROM HUMAN REVIEWS.



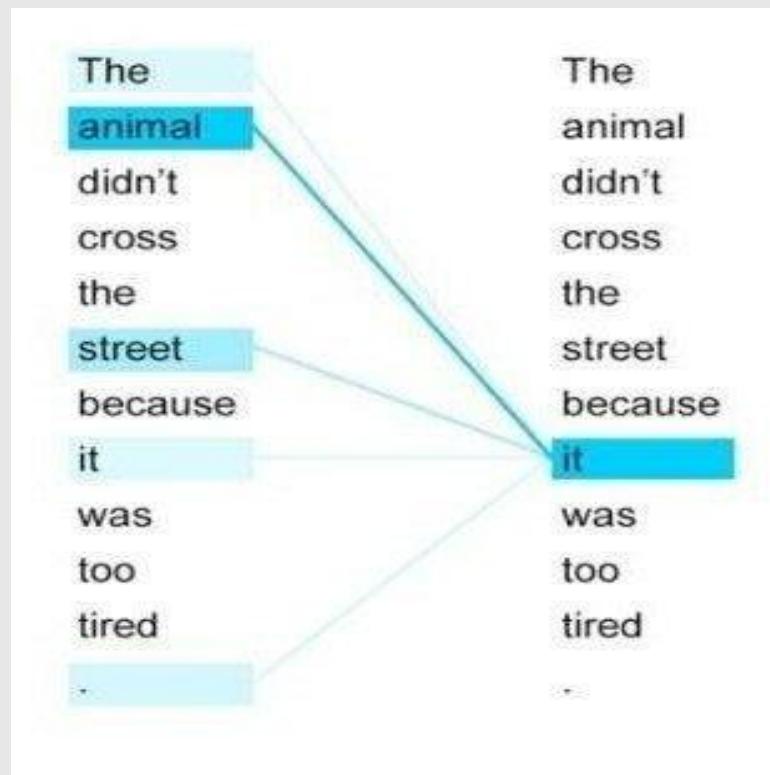
2017 (TRANSFORMER MODEL)

TRANSFORMERS: THE BUILDING BLOCKS OF LLMS

A TRANSFORMER IS A SPECIAL KIND OF NEURAL NETWORK, A TYPE OF MACHINE LEARNING MODEL. IT'S PARTICULARLY GOOD AT UNDERSTANDING AND GENERATING HUMAN LANGUAGE. HERE'S A SIMPLIFIED EXPLANATION:

1. **INPUT:** YOU GIVE THE TRANSFORMER A SENTENCE OR A PARAGRAPH.
2. **BREAKING DOWN:** THE TRANSFORMER BREAKS DOWN THE SENTENCE INTO SMALLER PARTS, LIKE WORDS OR PHRASES.
3. **UNDERSTANDING RELATIONSHIPS:** IT THEN FIGURES OUT HOW THESE PARTS RELATE TO EACH OTHER. FOR EXAMPLE, IT UNDERSTANDS THAT "DOG" AND "BARK" ARE OFTEN RELATED.
4. **GENERATING OUTPUT:** BASED ON THIS UNDERSTANDING, IT CAN GENERATE A NEW SENTENCE IN A DIFFERENT LANGUAGE OR COMPLETE A SENTENCE YOU STARTED.

2017 (TRANSFORMER MODEL)



05.

TRANSFORMERS VS RNN

DIFFERENCE B/W TRANSFORMERS AND
RNN MODELS

(A) /

TRANSFORMER VS RNN

RNN (RECURRENT NEURAL NETWORKS):

- **ARCHITECTURE** : RNNs PROCESS INPUT SEQUENCES ONE STEP AT A TIME. THEY HAVE A HIDDEN STATE THAT CARRIES INFORMATION FROM PREVIOUS STEPS TO INFLUENCE FUTURE ONES. EACH TIME STEP PASSES ITS OUTPUT AS INPUT TO THE NEXT STEP, FORMING A CHAIN-LIKE STRUCTURE.
- **MEMORY** : RNNs USE THEIR HIDDEN STATE TO MAINTAIN A SHORT-TERM MEMORY OF PAST INFORMATION. HOWEVER, THEY SUFFER FROM THE **VANISHING GRADIENT PROBLEM** , WHERE GRADIENTS BECOME TOO SMALL DURING BACKPROPAGATION, MAKING IT HARD TO LEARN LONG-TERM DEPENDENCIES.

TRANSFORMER VS RNN

TRANSFORMERS:

- **ARCHITECTURE :** TRANSFORMERS USE **SELF-ATTENTION MECHANISMS** TO PROCESS ALL ELEMENTS OF A SEQUENCE SIMULTANEOUSLY, INSTEAD OF SEQUENTIALLY. EACH WORD (OR TOKEN) IN THE INPUT CAN "ATTEND" TO EVERY OTHER WORD, ASSIGNING WEIGHTS TO DECIDE WHICH OTHER WORDS ARE MOST RELEVANT FOR UNDERSTANDING THE CONTEXT.
- **MEMORY :** TRANSFORMERS DON'T HAVE A HIDDEN STATE LIKE RNNs. INSTEAD, THEY RELY ON ATTENTION TO LOOK AT ALL POSITIONS IN THE SEQUENCE AT ONCE, ALLOWING THEM TO HANDLE LONG-RANGE DEPENDENCIES MUCH MORE EFFECTIVELY.

06.

THE GPT MODELS

GPT MODELS AND CHAT GPT

/([AI])

THE GPT MODELS



THE GPT MODELS

GPT - 1

THE FIRST GPT MODEL, NOW KNOWN AS GPT-1, WAS INTRODUCED BY OPENAI IN 2018. IT IS AN ADVANCED ITERATION OF THE ORIGINAL TRANSFORMER ARCHITECTURE, FOCUSING EXCLUSIVELY ON ITS DECODER PART. THIS FOCUS ENABLES GPT TO EXCEL IN TEXT GENERATION, AS IT IS TRAINED TO PREDICT THE NEXT WORD IN A SEQUENCE GIVEN ALL THE PREVIOUS WORDS.

IMPORTANTLY IT SHOWED SOME CAPABILITY IN ANSWERING GENERAL QUESTIONS AND THESE QUESTIONS DID NOT NEED TO BE PRESENT IN THE TRAINING DATA. THIS IS KNOWN AS ZERO-SHOT LEARNING. IT'S A REMARKABLE FEATURE AND IT HIGHLIGHTED THE POTENTIAL OF LANGUAGE MODELS TO GENERALIZE FROM THEIR TRAINING DATA AND APPLY IT TO ARBITRARY TASKS.

THE GPT MODELS

GPT - 2

GPT-2 BOASTED 1.5 BILLION PARAMETERS, SIGNIFICANTLY SURPASSING THE LEARNING CAPABILITIES OF GPT-1. THIS TIME THEY USED A MUCH LARGER NETWORK WITH AROUND 300,000 NEURONS. THE RESULTS SURPRISED EVEN THE RESEARCHERS.

THEY TESTED IT ON READING COMPREHENSION, SUMMARIZATION, TRANSLATION, AND QUESTION ANSWERING. AMAZINGLY IT COULD TRANSLATE LANGUAGES AS WELL AS SYSTEMS TRAINED ONLY ON TRANSLATION WITHOUT ANY TRANSLATION SPECIFIC TRAINING.

THE PROBLEM STILL WAS THAT GPT2 STILL DRIFTED OFF AFTER MANY SENTENCES . BUT THE TEAM NOW UNDERSTOOD THAT THIS COULD BE SOLVED SIMPLY BY MAKING EVERYTHING BIGGER AGAIN, ESPECIALLY THE CONTEXT WINDOW.

THE GPT MODELS

GPT - 3

THEY DID THE SAME EXPERIMENT THIS TIME THEY TRAINED IT ON THE ENTIRE COMMON WEB PLUS WIKIPEDIA AS WELL AS SEVERAL BOOK COLLECTIONS. AGAIN IT SHOWED INCREASED PERFORMANCE ACROSS ALL MEASURES .

ONCE TRAINING WAS COMPLETE YOU COULD STILL TEACH THE NETWORK NEW THINGS KNOWN AS IN-CONTEXT LEARNING. IN THE GPT3 PAPER RESEARCHERS SHOWED A SIMPLE EXAMPLE WHERE THEY FIRST GAVE THE DEFINITION OF A MADE-UP WORD, “GIGAMAROO”, AND THEN ASKED IT TO USE THAT WORD IN A SENTENCE WHICH IT DID PERFECTLY.

THE KEY TAKEAWAY WAS THAT WE COULD TEACH A FROZEN NEURAL NETWORK NEW TASKS WITHOUT CHANGING ITS INTERNAL STRUCTURE. THIS IS POSSIBLE BECAUSE THE NETWORK CAN USE ITS EXISTING KNOWLEDGE TO UNDERSTAND AND RESPOND TO NEW SITUATIONS.”

ARTIFICIAL

INTELLIGENCE

(AI)

AWESOME
WORDS



(AI)

<<<



QR CODE FOR QUICK DRAW



A
A
D
D

<<<<

```
def chatbot(prompt):
    response = ollama.chat(model='Flirty', messages=[
        {
            'role': 'user',
            'content': prompt,
        },
    ])
    s = response['message'][0]['content']
    return remove_emoji(s)
```

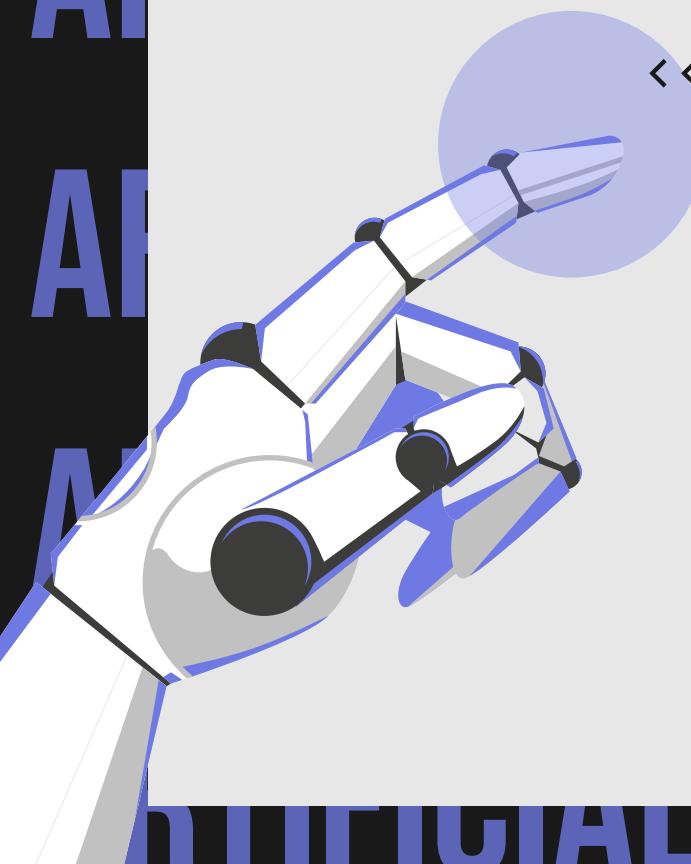


ARTIFICIAL INTELLIGENCE (AI)

AI

AI

ARTIFICIAL INTELLIGENCE (AI)



USAGE OF ML IN REAL LIFE

**How ML is used for
various uses in industry**

By Jatin Sahoo (2nd year AI ML)



01.

MAKING MACHINE LEARN A SPORTS

And How is it Possible???



Sports and machines

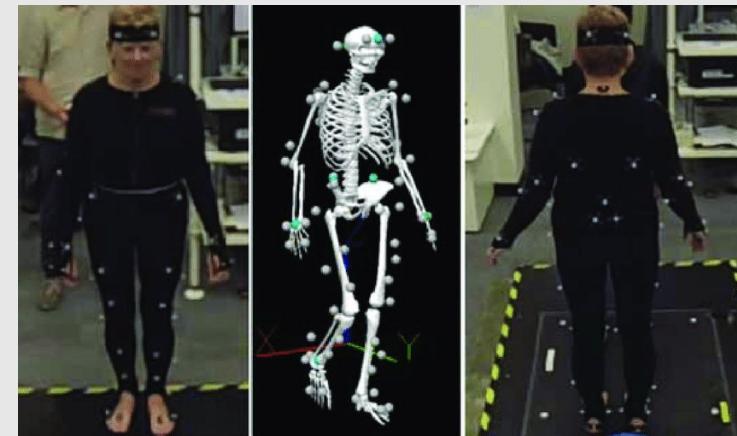
TO MAKE LEARN MACHINE A SPORT WE HAVE TO GATHER DATA SET FOR THE MODEL THAT WOULD WORK ON THAT DATA SET.

FOR EXAMPLE: IF WE WANT TO MAKE A MACHINE THAT PLAYS FOOTBALL WE HAVE TO GATHER SOME DATA THE DATA INCLUDES WEARABLE SENSOR DATA VIA MOTION CAPTURE SUITS, PLAYER STATS ETC.

AND THEN WE TRAIN OUR MODEL ON THE BASIS OF DATA THAT WE ACQUIRED THROUGH ABOVE METHODS.

AND THEN WE GET THE OUTPUT OR PREDICTION THAT WHAT MAY A SOLID OUTPUT WOULD LOOK LIKE.

THIS METHODS CAN MAJORLY USE IN GAMING INDUSTRY AND HIGHER TRAINING FACILITIES.





02.

IMAGE RECOGNITION

Its Pretty Common but how does it work??



IMAGE RECOGNITION

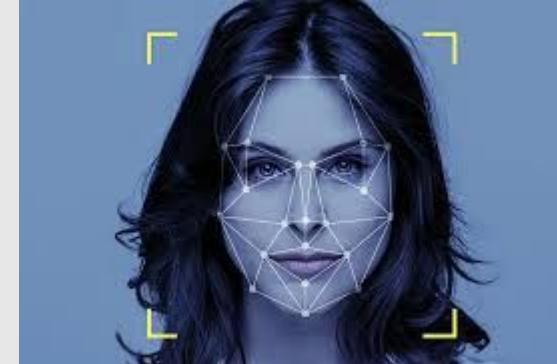
AS FOR THE IMAGE RECOGNITION, THE MACHINE DOESNT
RECOGNIZE ANY IMAGE....

BUT IT RECOGNISES PIXELS AND ITS DENSITY
WITHIN THE GIVEN IMAGE.

AFTER THAT WE MAKE A DATA SET ABOUT THE
PIXEL DENSITY WITHIN IMAGE.

WE TRAIN THE MODEL ON THE BASIS OF INFORMATION ABOUT PIXEL DENSITY ON
THE IMAGE....

THEN WE GET OUTPUT VIA IT DETECTS A PERSON'S IMAGE OR AN OBJECTS IMAGE





03.

VOICE RECOGNITION

Present Everywhere but how does it work??



VOICE RECOGNITION

WE ALL KNOW MACHINE ONLY RECOGNIZE NUMBERS. SO HOW DO WE PORTRAY A SOUND INTO NUMBERS????

THE ANSWER IS ALL SOUNDS IS A WAVE AND IT HAS ITS OWN FREQUENCY

HUMAN EARS CAN PERCIEVE FREQUENCY BETWEEN 20HZ - 20KHZ

AND EVERY SOUND IN THIS WORLD THAT A HUMAN CAN LISTEN HAS ITS OWN FREQUENCY. AND ITS DIFFERENT FOR EVERY HUMAN.

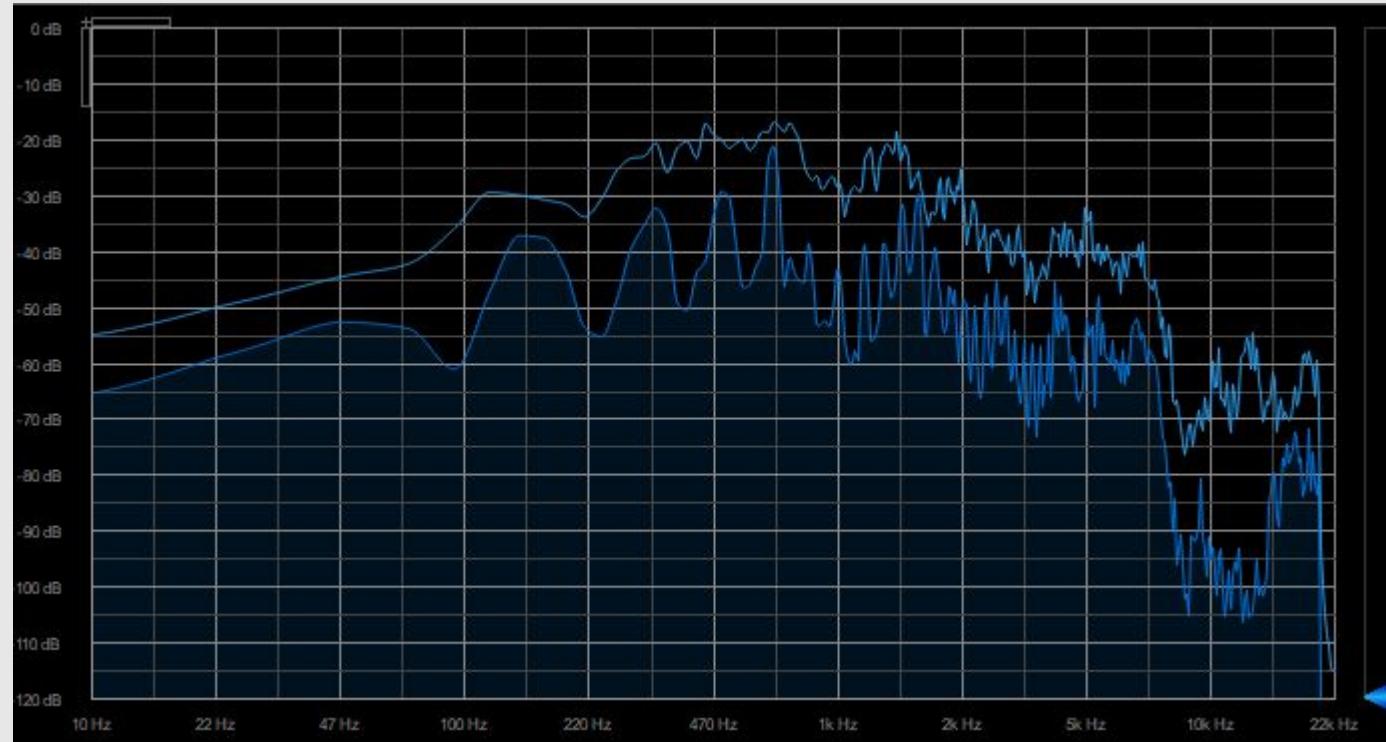
SO THE DATA SET THAT IS FED TO MODEL IS A RANGE OF FREQUENCY AND DIGITAL SIGNALS THROUGH MICROPHONE TO TRAIN ITSELF.

AND IN OUTPUT THE MACHINE RECOGNISES OUR VOICE.

IN LATEST VOICE RECOGNITION MODELS, IT CAN RECOGNISE PHONEMES AND THE RHYTHM OF THE VOICE.



<<<<



FREQUENCY PROFILE OF A NORMAL HUMAN VOICE



04.

AUTONOMOUS CARS

Self Driving Cars....???





AUTONOMOUS CARS

WE ALL KNOW TESLA RIGHT..??

TESLA MAKES SELF DRIVING CARS, BUT HOW DO THEY WORK????

WE ALL KNOW FOR REAL LIFE USAGE OF ML NEED THREE THINGS

DATA SET, MODEL AND OUTPUT/PREDICTIONS

FOR DATA SET WE TAKE MOTION SENSORS IN DIFFERENT CAR PARTS, CAR

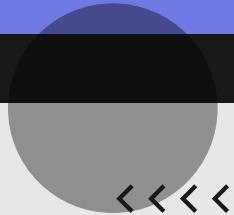
CAMERA FOOTAGES

WE TRAIN MODEL WITH THE GIVEN DATA SET AND IT PREDICTS AND ANALYSES

THE TRAFFIC INFRONT OF THE CAR, BEHIND THE CAR

ETC





05.

Recommendation system

SOCIAL MEDIA GO VROOM!!!!



Recommended system

WE ALL USE SOCIAL MEDIA BUT HOW DOES IT SHOW CONTENT?????

RECOMMENDED SYSTEM SHOWS THE CONTENT BY USING THE DATA WE GAVE WHEN WE WATCHED CONTENT EARLIER
THEN IT TARGETS THE CONTENT OF THE CONTENT CREATORS WHOSE CONTENT ALIGN OUR INTERESTS AFTER THAT
AFTER WATCHING FEW MEDIA ELEMENTS IT SHOWS US THE CONTENT WE WANT TO SEE..

IT IS USED IN

- 1) NETFLIX
- 2) SPOTIFY
- 3) YOUTUBE
- 4) INSTAGRAM
- 5) BASICALLY ANY SOCIAL MEDIA PLATFORM

YouTube

https://www.youtube.com

Search

IN

Home

Shorts

Subscriptions

You

History

Sign in to like videos, comment, and subscribe.

Sign in

Explore

Trending

Shopping

Music

Movies

Try searching to get started

Start watching videos to help us build a feed of videos you'll love.



<<<

06.

Fraud detection system



Fraud detection system

FRAUD DETECTION USING MACHINE LEARNING DEPLOYS A MACHINE LEARNING (ML) MODEL AND AN EXAMPLE DATASET OF CREDIT CARD TRANSACTIONS TO TRAIN THE MODEL TO RECOGNIZE FRAUD PATTERNS. THE MODEL IS SELF-LEARNING WHICH ENABLES IT TO ADAPT TO NEW, UNKNOWN FRAUD PATTERNS.

FRAUD DETECTION USING MACHINE LEARNING ALLOWS YOU TO RUN AUTOMATED TRANSACTION PROCESSING ON AN EXAMPLE DATASET OR YOUR OWN DATASET. THE INCLUDED ML MODEL DETECTS POTENTIALLY FRAUDULENT ACTIVITY AND FLAGS THAT ACTIVITY FOR REVIEW



07.

Disease detection



Disease detection

FOR DISEASE DETECTION WE TAKE VISIBLE SYMPTOMS AND MAKE DATA OUT OF IT.

FOR EG.: FOR TUMOR WE CAN MEASURE THE TUMOUR SIZE, WE CAN TAKE PICTURES OF TUMOUR AND OTHER FEATURES.

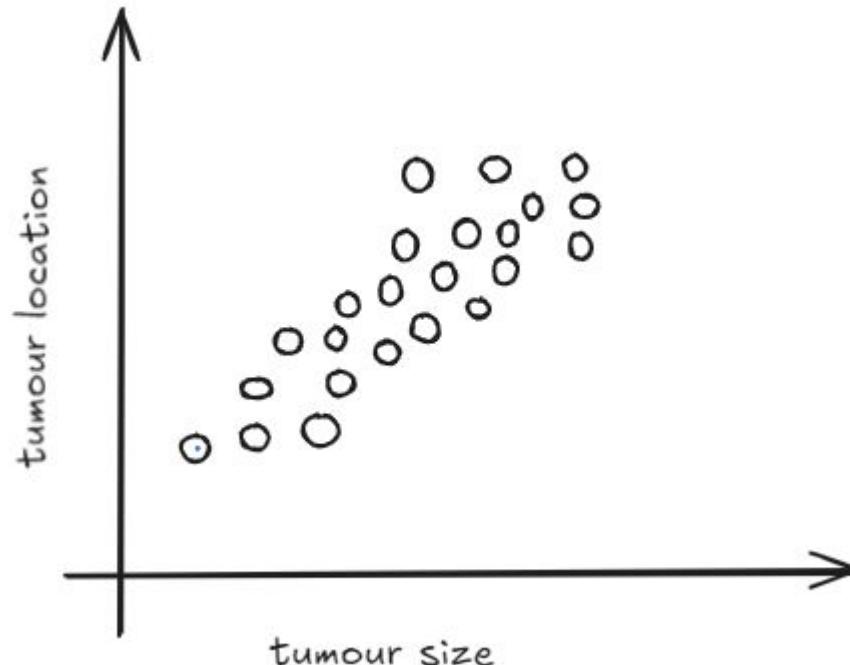
AFTER THAT WE WILL ANALYSE THE FEATURES (I.E. TUMOUR SIZE, DATA FROM IMAGES OF TUMOUR, TUMOUR LOCATION ETC.)

AND THEN WE WILL TRAIN THE MODEL WITH DATA SET.

AND WE CAN PREDICT IF SOMEBODY HAVE A TUMOUR OR NOT EARLIER THAN IT WOULD GROW.

<<<

Disease detection





FEEDBACK FORM



Affiliated to GGSIP University, New Delhi
Approved by AICTE & Council of Architecture



ENTREPRENEURSHIP

" UNLEASHING IDEAS, PIONEERING TOMORROW'S SOLUTIONS TODAY"



THE REALITY

Tech Layoffs 2024: iPhone maker Apple cuts jobs in digital services group. Details here

Tech layoffs 2024: Apple has announced 100 job cuts in its digital services group even as the iPhone maker is expanding its operations in India, which is expected to create around 600,000 jobs.

Bad beginning of 2024? Tech jobs again under risk, big tech companies have already fired 1000s of employees

The start of 2024 marked the return of the tech industry's nightmare, with mass layoffs resuming after a brief respite. Major tech companies including Google, Microsoft, Amazon, and others have already laid off thousands of employees till date.

Listen to Story

Share

SILICON VALLEY IN REST OF WORLD

U.S. tech layoffs sent Indian workers home to an even worse job market

Indian tech workers who were laid off in the U.S. and returned home say they have taken massive pay cuts and are earning less than their peers in India.

Job market downturn: After IIM Lucknow, BITS Pilani reaches out to alumni requesting to help place students

"The global economy has not experienced this kind of slump since decades," said the institution.

By **STORYBOARD18** | Feb 22, 2024 5:03 PM



GOVERNMENT INCENTIVES

Government Initiatives:
Supportive government policies like Startup India have streamlined regulations and offered funding options and tax incentives, fostering a more conducive environment for startup business ideas to thrive in the Indian economy





SCHEMES

STARTUP INDIA SEED FUND



Mudra Yojana
scheme



ATAL INNOVATION MISSION



eBiz portal





TAX SCHEMES FOR START-UPS



Tax Holiday: Any startup company incorporated in the period from April 1, 2016, to March 31, 2022 extended to March 31 2023 as per finance act 2022, is eligible for this benefit. It can avail a 100% tax exemption on the profits earned for a block of three years in the first ten years of incorporation.



Domestic companies have to issue their shares at a fair market value. It is determined based on the net asset value or discounted cash flow determined by the respective merchant banker.



Long-term capital gain amounts are used to purchase shares in a registered and recognized startup within six months from the transfer of an asset, such amounts are considered for tax exemption.



As per Section 54GB of the Income Tax Act, if any individual/HUF sells a residential property and uses the amount to invest in SMEs or purchases 50% or more shares of eligible startups, they will be exempt from paying long-term capital gains.



The tax on investments above fair market value is exempt from tax for startups. These investments include investments by angel investors, investments by incubators, and investments by funds and individuals not registered as venture capital



WHERE INDIA STANDS

INDIA | USA

Number of startups

4,200-4,400

47,000-48,000

2015 GDP (\$B)

2,183 17,968

GDP/Startup (Mn)

508 378

2015-20 Nominal growth



Population/Startup

300,698 6,758

Number of VCs

156 1300

2014 VC funding (\$B)

6.50

47.3

Number of angels

300 300,000

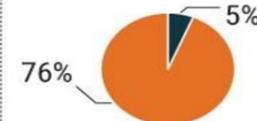
2014 number of deals

510 3,617

2015 population (Mn)

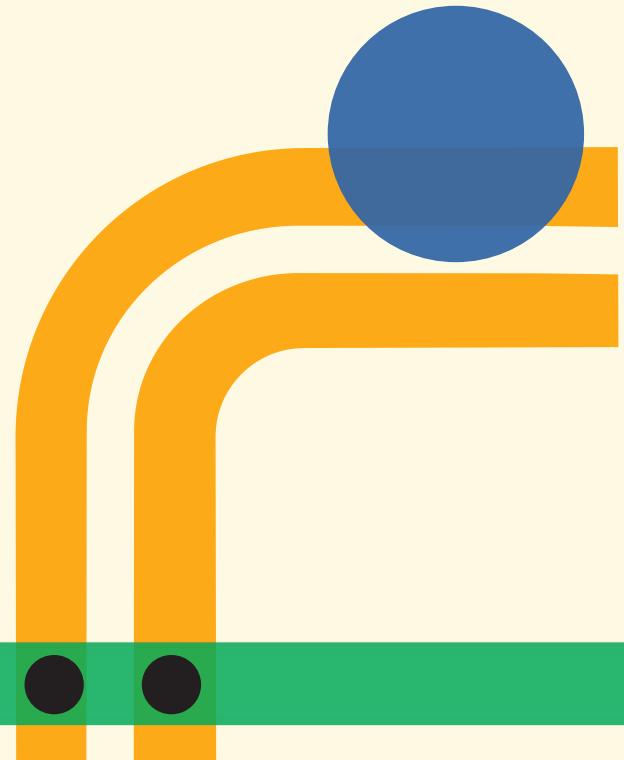


Share of global VC funding



Number of unicorns

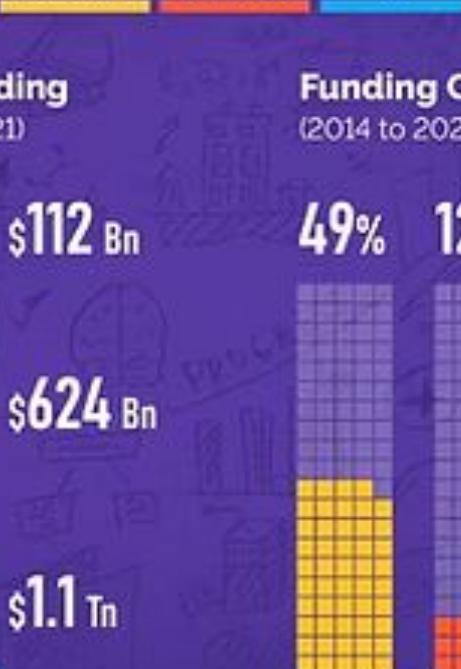
7 98



INDIA vs CHINA vs US

A comparison of startup ecosystem

INDIA CHINA US



Total Funding
(2014 to 2021)



\$112 Bn



\$624 Bn



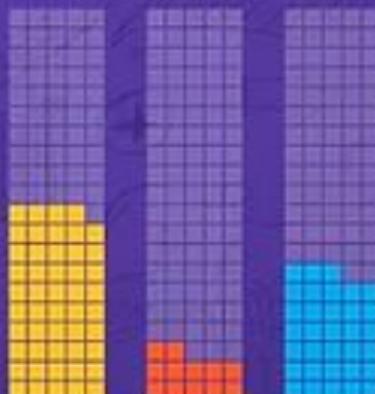
\$1.1 Tn

Funding CAGR
(2014 to 2021)

49%

12%

33%



INDIA vs CHINA vs US

A comparison of startup ecosystem

INDIA CHINA US



Internet
Penetration (2021)

61%

73%

90%



Total Internet
Users (2021)

846 Mn



1.03 Bn



302 Mn



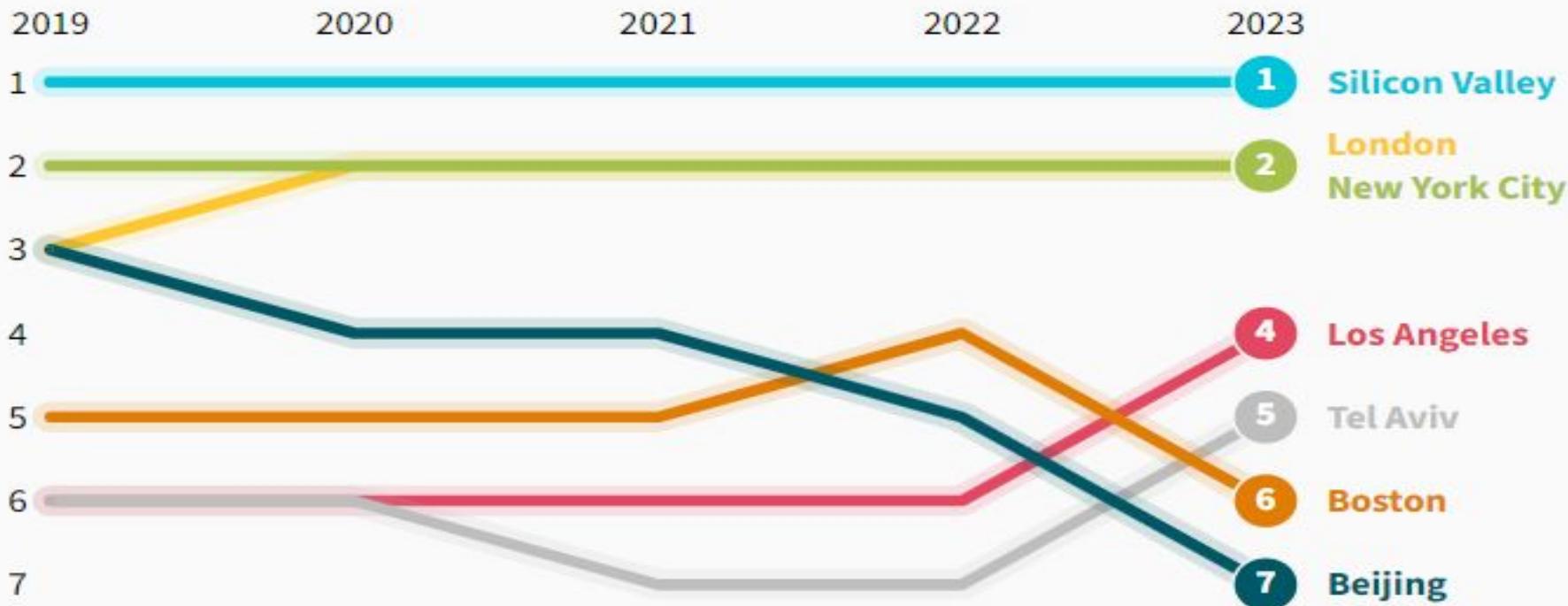
GLOBAL STARTUP ECOSYSTEM RANKING

(2019-2023)



Startup Genome

Replay





**THANK
YOU**



DELHI TECHNICAL CAMPUS

" UNLEASHING IDEAS, PIONEERING TOMORROW'S SOLUTIONS TODAY"



OPPORTUNITY FOR Entrepreneurship “IN INDIA”



Presentation | 4th September

2024

Affiliated to GGSIP University, New Delhi
Approved by AICTE & Council of Architecture

OVERVIEW



Introduction

India's
Situation

Import and Export

Demand & Supply

Geopolitics of India

Problem

Solution

Objective

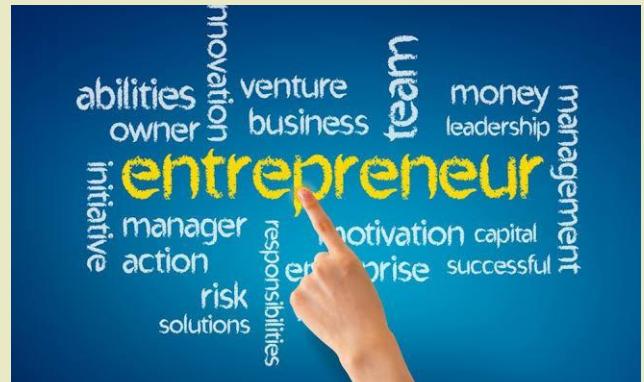
Methodology

Conclusion

INTRODUCTION

An entrepreneur is an individual who starts a business

ENTREPRENEURIAL MINDSET



Entrepreneurship is the process of creating, developing, and managing a business

THE ECONOMIC TIMES | News

English Edition ▾ | 25 August, 2024, 07:07 PM IST | [Today's ePaper](#)

India's remarkable progress: A look back at 77 years

ET Online • Last Updated: Aug 15, 2024, 11:12:00 AM IST

Synopsis

78th Independence Day: India, marking 77 years of independence, has seen extraordinary advancements in diverse sectors. The article acknowledges the contributions of pioneers and innovators who have driven the nation's progress. Highlighting achievements in agriculture, space, sports, and more, it underscores India's evolution into a global soft power. Celebrating this milestone, the nation looks forward to continued growth.

India's cultural imprint has grown globally, becoming a soft superpower through [Yoga](#), [Ayurveda](#), cinema, and its diaspora. The nation's cultural exports have enlightened, enchanted, and dazzled the world, contributing to its influence in politics and business on a global scale.

Numbers such as agricultural productivity, space missions, athletic achievements, and academic accolades provide benchmarks of progress. Yet, they do not capture the visionary efforts of individuals who turned dreams into reality or the resilience of those who built formidable institutions.

For three consecutive years, India's economy has exceeded growth expectations (averaging 8.3% annual growth over this period) despite global uncertainties, driven by strong domestic demand and continuous government efforts toward reforms and capital expenditure. 5 Aug 2024

16.9% increase from the revised estimates for 2023-2024.

- Central sector schemes: ₹14,94,296 crore, a 3.3% increase from the 2023-2024 revised estimate [🔗](#)
- Centrally sponsored schemes: ₹5,01,788 crore, an 8.9% increase from the 2023-2024 revised estimate [🔗](#)
- Total capital expenditure: ₹11.1 trillion, a 16.9% increase from the 2023-2024 revised estimate [🔗](#)
- Effective capital expenditure: ₹15.01 trillion, an 18.2% increase from the 2023-2024 revised estimate [🔗](#)
- Infrastructure: ₹11,11,111 crore, or 3.4% of GDP [🔗](#)
- States: ₹1.5 lakh crore in long-term interest-free loans [🔗](#)

THE ECONOMIC TIMES | News

English Edition ▾ | 25 August, 2024, 07:38 PM IST | Today's ePaper

Army leadership outlines roadmap to transform force for govt's vision of 'Viksit Bharat'

PTI • Last Updated: Aug 19, 2024, 10:51:00 PM IST

Synopsis

Army Chief Gen Upendra Dwivedi met with senior generals to align the Indian Army's transformation with India's 2047 development goals. Key discussions included modernisation, joint operations enhancement, and promoting self-reliance in equipment and technology. The meeting aimed at making the Army more agile, adaptive, and capable of addressing future multi-domain challenges.



New Delhi: **Army** Chief Gen Upendra Dwivedi on Monday held a key meeting with his top generals that focused on transforming the 1.2 million-strong force in line with the government's vision to make **India** a developed country by 2047. The discussions centred around **modernisation** of all combat and **logistics** arms of the Army as well as reorganisation of its headquarters, command headquarters, and other key formations to ensure optimal efficiency and operational readiness of the force.

INDIA'S SITUATION

It said discussions were centred around ongoing transformational initiatives by the Indian Army and its contribution towards achieving the objective of 'Viksit Bharat' (developed India) by 2047.

The top leadership of the force decided to work towards transforming the Army into a "modern, agile, adaptive, technology-enabled, and self-reliant future-ready force, capable of deterring and winning wars in a multi-domain environment across the spectrum of operations".

In the meeting, Gen Dwivedi exhorted all stakeholders to promote 'Atmanirbharta' (self-reliance) in development of equipment, platforms, and weapons and support Indian defence industries.

INDIA'S SITUATION

Self reliant

"Actions to enhance jointness and integration in armed forces were also discussed for strengthening of joint service structures and organisations besides the need to establish common military stations and units for logistics, communication, and other essential services," it said.

Russian invasion of Ukraine

As of Aug. 13, 2024

- Approximate Russian-occupied Ukrainian territory
- Approximate territory retaken by Ukraine since Sept. 1, 2022
- Approximate area of Ukraine's advances into Russia
- City occupied by Russian forces



© OpenStreetMap contributors

INDIA'S SITUATION

Unemployment

THE ECONOMIC TIMES | News

English Edition ▾ | Today's ePaper

Home ETPrime Markets Market Data News Industry Rise Politics Wealth MF Tech Careers Opinion NRI Panache ETTV Spotlight :
India Decoded Web Stories Morning Brief Podcast Newsblogs Economy ▾ Industry ET Explains Politics More ▾

Business News > News > Economy > Policy > ET Budget Survey: 50% say unemployment is top challenge for India

ET Budget Survey: 50% say unemployment is top challenge for India



India has set eyes to become the third largest economy by 2030 while its Viksit Bharat vision is to make the country a developed nation by 2047. However, **unemployment** continues to be a major headache for the country even as it grew 8.2 per cent in FY24 and has managed to grow at an average of 8 per cent in the last three years. In an ET Online survey, over 50 per cent of respondents believe unemployment is the top challenge for the Indian economy.

09

The Current Unemployment Rate in India:

According to the latest data from the Centre for Monitoring Indian Economy (CMIE), an independent think tank, the unemployment rate in India stood at 9.2 percent in June 2024, a sharp increase from 7 percent in May 2024.

Employability vs Employment (NERE)

Employable	Got an Interview Opportunity	Reached Final Round	Employed	Average Salary
19.11 %	72.64 %	51.66 %	19.91 %	3,13,000

INDIA'S SITUATION

Comparison from Other Countries

Top Countries in terms of GDP, Ecosystem in Production



United States of America



Russia

a



China

United States of America

The U.S. ranks among the world's highest in economic competitiveness, productivity, innovation, human rights, and higher education. Its hard power and cultural influence have a global reach.

Economic Strength

Cultural Involvement

Global Influence

Geopolitics

Sanctions against Russia: what have been the effects so far?

Western sanctions have hindered Russia's production of many goods and led to a widening budget deficit. While these measures alone cannot end the war, they do limit Russia's ability to replace its destroyed military equipment and finance the campaign.

China's emergence as the world's manufacturing powerhouse is a key driver of its export success. The country has established an extensive manufacturing infrastructure, supported by a vast labor force and a robust industrial ecosystem. 23 May 2023

Low-cost supply chains

Global value chains

Export-led growth strategy

Special economic zones

TWO FRONT FACE WAR



PAKISTAN



CHINA

According to a senior security expert, '**currently India does not have the initiative and is not in a position to simultaneously engage with both its adversaries.**' It does not have the intention, resources, political and military will, or the leadership to do so.

NH https://www.nationalheraldindia.com > ...

Not ready for 'two-and-a-half front' war - National Herald

India exports of goods and services as percentage of GDP is 21.51% and imports of goods and services as percentage of GDP is 24.15%.

2021-2022

Merchandise exports were \$335.44 billion, which is a 46.53% increase from 2020-2021. Merchandise imports were \$52.01 billion in January 2022. [🔗](#)

February 2022

Merchandise exports were \$34.57 billion, which is a 25.10% increase from February 2021. Merchandise imports were \$55.45 billion, which is a 36.07% increase from February 2021. [🔗](#)

March 2023

Overall exports were estimated to be \$66.14 billion, which is a 7.53% decrease from March 2022. Overall imports were estimated to be \$72.18 billion, which is a 7.98% decrease from March 2022. [🔗](#)

DEMAND & SUPPLY

Demand and Supply in India

By Manu Pubby, ET Bureau • Last Updated: Jul 05, 2024, 11:21:00 PM IST

ETPrime FOLLOW US SHARE FONT SIZE SAVE

India-Russia JV delivers 35,000AK-203 rifles in first phase

Synopsis
Indo-Russian Rifles in Amethi delivered 35,000 AK-203 rifles to the Indian Army. The Korwa Ordnance Factory began production after its 2019 inauguration and a ₹5,124 crore technology transfer. It will supply paramilitary, police forces, and enable exports to friendly nations, complying with Make in India and Atmanirbhara Bharat policies.



An India-Russia joint venture that was set up to produce the AK-203 assault rifles has completed its first phase with the delivery of 35,000 sets to the Indian Army and the facility at Amethi is now fully equipped to produce the rifles in large numbers.

The Amethi factory, which produced its first set of 5,000 rifles in January last year, is geared to meet the requirements of Indian armed forces that are in excess of 600,000 rifles and will also cater to exports in the future.

DEMAND & SUPPLY



The LCA Mark 1A project was conceptualised after Prime Minister Narendra Modi took charge. One order worth Rs 48,000 crore for 83 planes has already been placed and another one expected to be worth Rs 65,000 crore is going to be placed for 97 planes by the end of this financial year.

12 Jul 2024



<https://m.economictimes.com › news>

Amid delays, HAL now aiming to deliver first LCA Mark 1A by August 15; GE engine supplies to start by September

DEMAND & SUPPLY

Demand and Supply in India

THE ECONOMIC TIMES | News

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Business News > News > Defence > India's plan for advanced fighters: LCA Mark2 by 2029, AMCA by 2035

India's plan for advanced fighters: LCA Mark2 by 2029, AMCA by 2035



India to begin production of LCA Mark2 jets by 2029, 5th gen fighter AMCA by 2035



India to begin production of LCA Mark2 jets by 2029, 5th gen fighter AMCA by 2035

In a significant boost to India's indigenous fighter aircraft program, 4.5 generation plus LCA Mark 2 fighter jets are slated to commence flights by March 2026, with mass production expected to begin by 2029. Furthermore, the mass production of the Advanced Medium Combat Aircraft (AMCA), a fifth-generation fighter, is anticipated to start by 2035, according

to defense officials. These timelines emerged during a high-level meeting presided over by DRDO chairman Dr. Samir V. Kamat and Indian Air Force Deputy Chief Air Marshal Ashutosh Dixit.



The Economic Times

<https://m.economictimes.com> › news

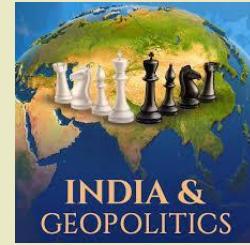
'Make in India' under a cloud takes shine off manufacturing

5 Jun 2024 – The BSE Infrastructure Index slumped 15.1% and the Manufacturing Index tumbled 6.3% on Tuesday as against the 5.7% decline in the Sensex. Bharat ...

Key Challenges Faced by the 'Make In India' Initiative

- Infrastructure and Logistic Hurdles.
- Regulatory and Policy Barriers.
- Skills and Training Deficits.
- Technological Challenges.
- Financial Limitations.
- Policy Reforms and Regulatory Simplifications.
- Investing in Infrastructure Development.

India is today in the midst of a major geopolitical repositioning, as it discards its old non-aligned movement rhetoric, pursues a hard headed national interests based policy and builds stronger strategic ties with a wide range of countries including the United States and its allies in the region, especially Japan.



United States of America

- Fighter planes
- GE Jet Engines
- Pharmaceutical Products
- Machinery
- Plastics
- Electrical Equipment

Russia

- a
- Fertilizers
- Paper
- Cleavage Products
- Commodities
- Weapons
- Medical Apparatus

China

- Organic Chemicals
- Plastics
- Automobile parts
- Toys
- Machinery
- Nuclear Machinery

SOLUTIONS



SOLUTION

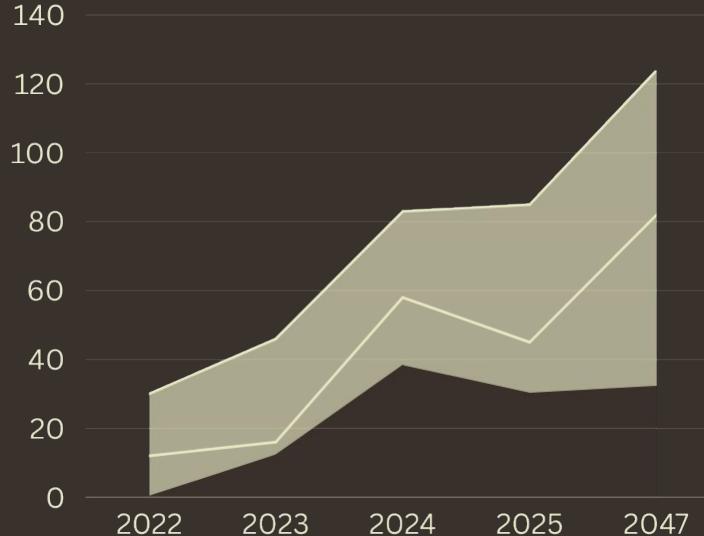
There is only one solution to all problems:

ENTREPRENEURSHIP

To make India::

SELF-RELIANT

A Production Ecosystem will need to be developed



SOLUTION



**"Ask not what your country can do for you
Ask what you can do for your country"**

OBJECTIVE

Objective of Ours

We want to bring together those people to build India's production ecosystem so that in the coming years, India remains self-reliant and exports more than it imports.

- Decrease unemployment
- Increase GDP
- Develop the Nation
- Infrastructure Development
- Increase National Security

METHODOLOGY



Methodology 1

Your Goals should be align with the national
Goals



Methodology 2

Proceed with that Product which is imported bring
technological revolution

Conclusion

**"A self-reliant India thrives on the strength of its people,
unlocking potential and leading the world with bold
innovation and determination."**



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Approved by AICTE & Council of Architecture

DELHI TECHNICAL CAMPUS

" UNLEASHING IDEAS, PIONEERING TOMORROW'S SOLUTIONS TODAY"



THANK

YOU



Business of Print on Demand:

**Company- Ludicoaura
Founder- Harsh Vardhan Singh**

Today I will explain about print on demand business and we will explore the potential of Print on Demand (POD) as a business.

So what is print on demand?

Its like dropshipping but with customised products.





How it works?

- Identify a winning product.
- Choose the niche or category.
- Make the winning design.
- Sell online.

How to setup the model?

- ▶ The model can be setup in many ways
- ▶ The offline model and the online model we will focus on online model Make a website find printing, partner find delivery partner.
- ▶ Take orders and sell.
- ▶ Need to manage prices sell to vendors in bulk.



How to sell ?

- Choose the selling platform.
- Choose the cost including taxes.
- Make winning ads.
- Run ads and get leads

Marketing Your POD Products

- Make winning ad.
- Choose platform.
- Check the SEO.
- Run ads





Challenges In Print on Demand

While POD offers various advantages, it also comes with challenges such as quality control, shipping times, and customer service. Understanding these hurdles will help you develop strategies to mitigate them, ensuring a smooth operation and satisfied customers.

Conclusion and Next Steps

In conclusion, Print on Demand holds immense potential for aspiring entrepreneurs. By understanding the process, setting up effectively, and implementing strong marketing strategies, you can thrive in this industry. Start your journey [unlock](#) and unlock your business's potential!





Thanks!