THIAGARAJAR COLLEGE OF ENGINEERING

Department of Information Technology
Proudly presents

iTunes

INNOVATIVE CREATIVE MINDS

ERA OF ARTIFICIAL INTELLIGENCE

AUG 2023

IDEAL OPTION FOR THE IMAGINATIVE MINDS

DEPARTMENT OF INFORMATIONTECHNOLOGY

Vision

Evolve into a Centre of Excellence for Education and Research in Information Technology.

Mission

- Attaining academic excellence through a well-designed curriculum adaptable to dynamic technological needs, competent faculty, and the innovative teaching-learning process.
- Promoting collaborative research through special interest groups, state-of-the-art research labs, and Industry Institute Interactions.
- Facilitating value-added courses to produce highly competent and socially conscious information technology professionals and entrepreneurs.

Editors Panel

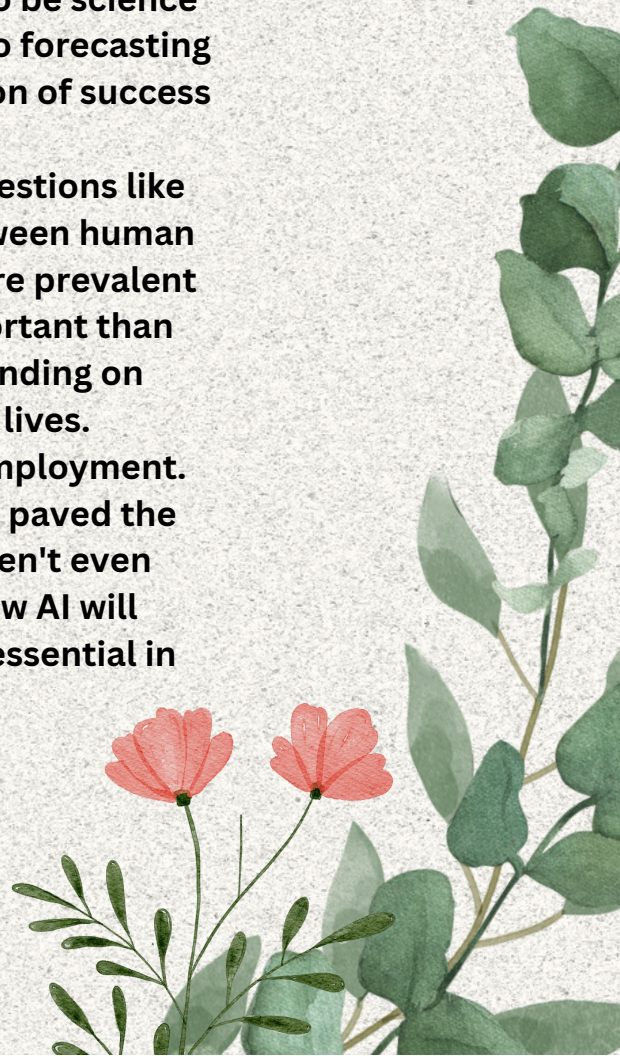|	
Ms. S. Thiruchadai Pandeeswari	Faculty Editor
P. Abishek (21IT006)	3rd Year
U.Annaamalai (21IT011)	3rd Year
A.Dhiyaneshwar (21IT031)	3rd Year
K.S.Gurucharan (21IT036)	3rd Year
S Vibishnan (21IT116)	3rd Year

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Editors Desk

We explore the "Era of AI's" revolutionary landscape in this exciting new issue of our magazine. Even though the title on the cover says "Artificial Intelligence," the tales within are all about how this technological revolution is already having a very tangible influence on our daily lives.

In this issue, we explore the diverse fields that AI has explored, from altering businesses and occupations to becoming an essential component of our daily lives. As we approach a new age, artificial intelligence (AI) isn't just a trendy term; it's a reality that's influencing the way we live, work, and think.

Discover how AI is changing the rules of the industry by turning the pages. The combination of human intellect with AI is producing results that were once thought to be science fiction, from improving consumer experiences to forecasting market trends. But as we'll see, the true definition of success is a partnership rather than a replacement.

Join us as we explore ethical AI's difficulties. Questions like privacy, prejudice, and the hazy distinction between human and machine decision-making are becoming more prevalent as AI's impact spreads. This debate is more important than ever as we try to understand the effects of depending on computers to make decisions that affect human lives.

Naturally, we also cannot ignore the future of employment. While AI has upended certain sectors, it has also paved the way for innovation and give rise to jobs that weren't even possible ten years ago. Our investigation into how AI will affect employment is proof that adaptability is essential in this dynamic environment.

So, dear readers, keep in mind that we're all participants in this transformational journey as you read the compelling anecdotes and thought-provoking ideas we've selected for you in this "Era of AI" issue. AI is a mirror of human creativity and curiosity, not a distinct entity in and of itself.

We appreciate your participation as we examine the "Era of AI." We hope that these pages motivate you to seize the chances that AI offers and to help create a future that is as exciting as it is inventive.

Happy reading!

Annaamalai U
Editor

10 Applications of AI in our Day-to-Day Life

In an era defined by technological advancements, Artificial Intelligence (AI) has emerged as a revolutionary force, subtly but profoundly transforming our day-to-day lives. From the moment we wake up to the time we rest our heads on the pillow, AI touches various aspects, making our lives more convenient, efficient, and enjoyable. This article delves into how AI has seamlessly integrated into our routines, becoming an indispensable part of modern existence.

1. Morning Assistant:

The alarm clock rings and your AI-powered virtual assistant wakes you up, considering factors like your sleep cycle and the traffic conditions. It even recommends weather-appropriate outfits based on real-time forecasts. This personalized assistance streamlines your morning routine.

.2. Smart Homes:

As you step into your smart home, AI takes charge. The thermostat adjusts itself based on your preferences and daily patterns. Lights turn on and off as you move around, minimizing energy consumption. AI-equipped appliances manage your grocery list and even suggest recipes based on the ingredients available.

3. Personalized Entertainment:

AI's influence extends to your leisure time. Streaming platforms use AI algorithms to recommend movies and shows that align with your preferences. Music apps curate playlists tailored to your mood, enhancing your entertainment experience.

4. Virtual Shopping Assistant:
Online shopping becomes more engaging with AI-driven chatbots that assist you in finding the right products, answering questions, and even suggesting alternatives. AI analyzes your browsing history and purchase patterns to offer personalized deals.

5. Healthcare and Wellness:
AI-powered wearable devices track your physical activities, heart rate, and sleep patterns. They can even alert you to potential health issues. AI algorithms analyze medical data to assist doctors in diagnosing diseases more accurately.

6. Language and Communication:
AI-driven language translation apps bridge linguistic barriers, enabling seamless global communication. Chatbots assist in customer service, swiftly addressing queries and resolving issues.

7. Transportation Revolution:
Self-driving cars, powered by AI, promise safer and more efficient roadways. AI algorithms process real-time traffic data to suggest the fastest routes, reducing travel time and stress.

8. Financial Management:
AI-driven financial apps provide budgeting insights, track expenses, and even offer investment advice. They learn from your financial behaviors to assist you in making informed decisions.

9. Environmental Impact:
AI technologies monitor environmental changes, predict natural disasters, and manage energy consumption in industries. This fosters sustainability and helps mitigate climate change.

10. Future Prospects:
As AI continues to advance, the scope of its influence will only broaden. Sectors like education, agriculture, and urban planning are poised for significant transformations. However, ethical considerations about AI's role in privacy, job displacement, and decision-making must be addressed.

In conclusion, AI has woven itself intricately into the fabric of our lives, revolutionizing the way we interact with the world around us. From mundane tasks to life-altering decisions, AI's presence is undeniable. As we navigate this AI-driven landscape, it's essential to strike a balance between harnessing its potential and ensuring that human values and ethics remain at the forefront of this technological revolution.

P.Abishek
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DATA SCIENCE

Understanding the basics

Commence your journey with Python, a prevalent language in AI/ML. Develop a robust grasp of probability/statistics and fundamental AI principles.

ML foundation

Take a plunge into the world of basic machine learning algorithms and workflows. Get the lowdown on data preprocessing, feature extraction, and nailing the art of picking the right ML algorithms while acing performance evaluation metrics.

DL & Neural network

Wrap your head around neural networks—architecture, layers, and functions. Get cozy with big players like TensorFlow and PyTorch. Level up with CNNs, RNNs, and the magic of transfer learning.

NLP & Applications

Dive into the world of text: master processing, tokenization, and even the mood with sentiment analysis. Venture into word embeddings (GloVe, Word2Vec), then take on text generation and the magic of language translation models.

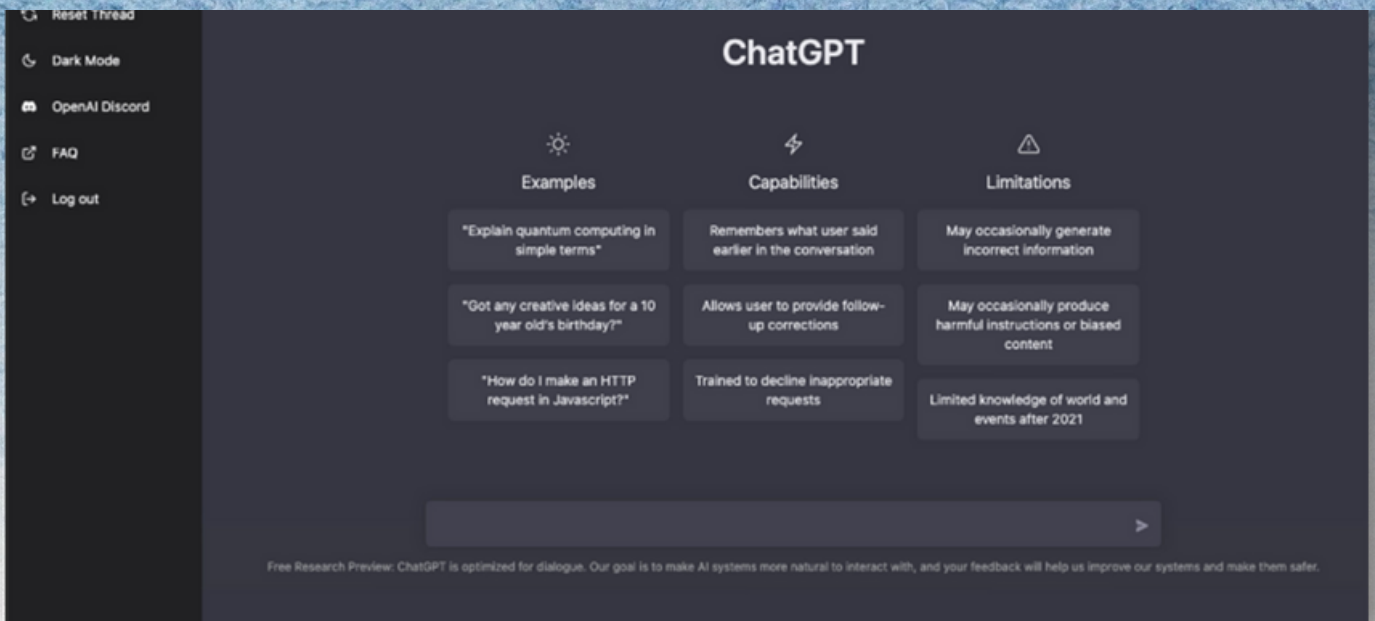## Reinforcement Learning & Advanced Topics

Immerse yourself in the art of reinforcement learning through playful interaction with environments. Roam the real-world terrain of AI and computer vision. Embrace the "forever curious, always experimenting" mindset.

Projects and Research

Put your know-how into action with AI projects. Delve into AI career avenues. Share your wisdom and creations via blogs and research publications.

ChatGPT Top 6 Tips & Tricks

ChatGPT is a powerful AI-powered tool that uses natural language processing to help you write better and faster. By providing a few prompts or examples, ChatGPT can help you brainstorm new ideas, write entire articles, or even create entire stories.However, while you can just type anything you like into ChatGPT and get it to understand you, there are ways of getting more interesting and useful results out of the bot. This "prompt engineering" is becoming a specialized skill of its own.
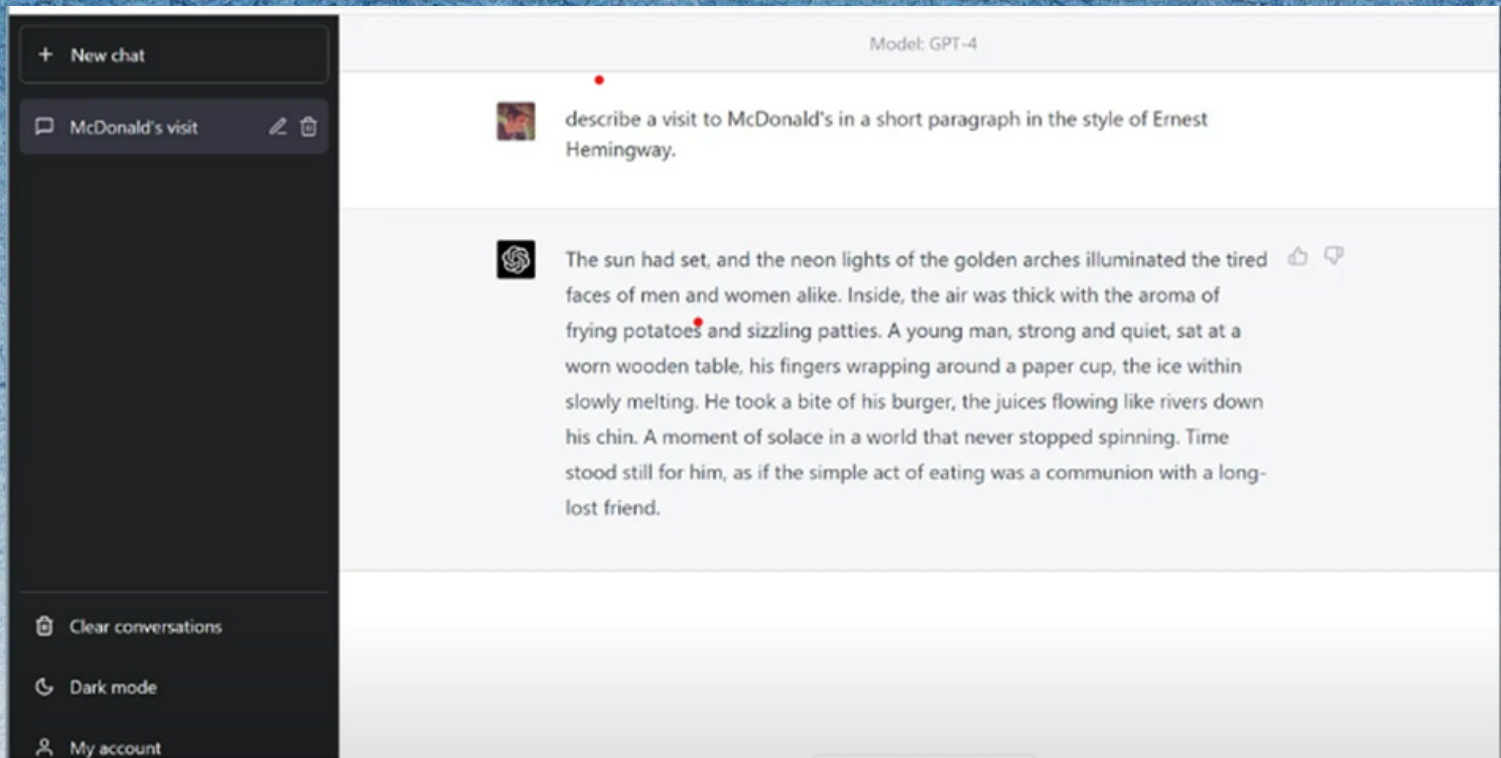

1.Get Your Answers in Tabular Form:

ChatGPT can give you responses in the form of a table if you ask. This is particularly helpful for getting information or creative ideas. For example, you could tabulate meal ideas and ingredients, or game ideas and equipment, or the days of the week and how they're said in a few different languages.

Using follow-up prompts and natural language, you can have ChatGPT make changes to the tables it's drawn and even produces them in a standard format that can be understood by another program (such as Microsoft Excel).

2.Output Text in the Style of Your Favorite Author:

With some careful prompting, you can get ChatGPT out of its rather dull, matter-of-fact, default tone and into something much more interesting—such as the style of your favorite author, perhaps.

You could go for the searing simplicity of an Ernest Hemingway or Raymond Carver story, for instance, or the lyrical rhythm of a Shakespearean play, or the density of a Dickens novel. The end results don't come close to the genius of the actual authors themselves, but it's another way of being more creative with the output you get.

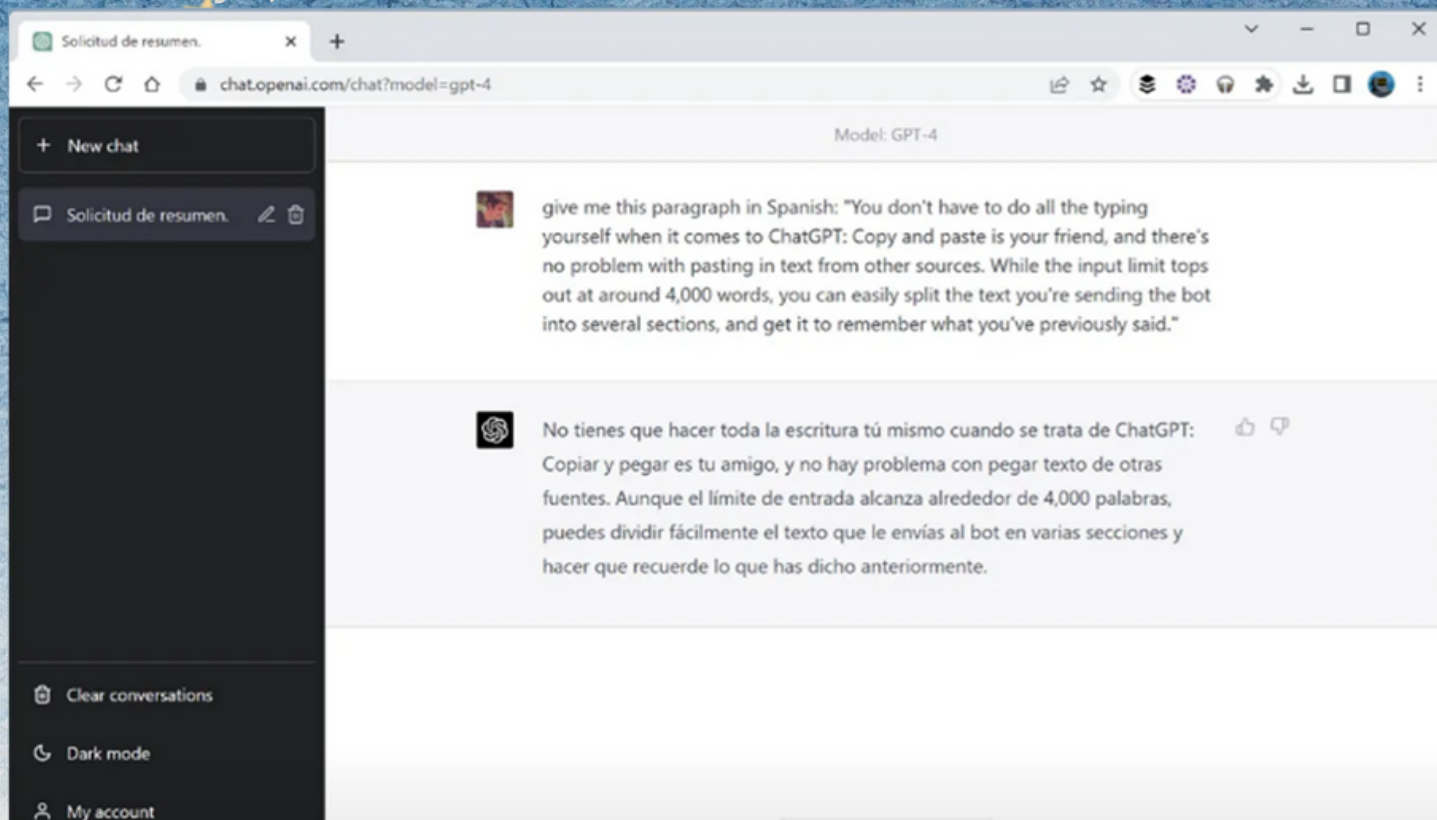## 3.Keep Your Audience in Mind:

Another way of tweaking the way that ChatGPT responds to you is to tell it who its audience is. You might have seen the videos in which complex subjects are explained to people with different levels of understanding, and this works in a similar way.

For example, you can tell ChatGPT that you are speaking to a bunch of 10-year-olds or to an audience of business entrepreneurs and it will respond accordingly. It works well for generating multiple outputs along the same theme.

4. Copy and Paste Text From Other Sources:

You don't have to do all the typing yourself when it comes to ChatGPT. Copy and paste is your friend, and there's no problem with pasting text from other sources. While the input limit tops out at around 4,000 words, you can easily split the text you're sending the bot into several sections and get it to remember what you've previously said.

Perhaps one of the best ways of using this approach is to get ChatGPT to simplify text that you don't understand—the explanation of a difficult scientific concept, for instance. You can also get it to translate text into different languages, write it in a more engaging or fluid style, and so on.

5. Provide Examples to Work With:

Another way to improve the responses you get from ChatGPT is to give it some data to work with before you ask your question. For instance, you could give it a list of book summaries together with its genre, then ask it to apply the correct genre label to a new summary. Another option would be to tell ChatGPT about activities you enjoy and then get a new suggestion.

There's no magic combination of words you have to use here. Just use natural language as always, and ChatGPT will understand what you're getting at. Specify that you're providing examples at the start of your prompt, then tell the bot that you want a response with those examples in mind.

6. Hear Both Sides of a Debate:

Get the assistance of ChatGPT to add some grey between the black and white since binary arguments have probably become more common online in recent years. If you ask it to, it can present both the advantages and disadvantages of a position.

From politics and philosophy to sports and the arts, ChatGPT is able to sit on the fence quite impressively—not in a vague way, but in a way that can help you understand issues from multiple perspectives.

A.Dhiyaneshwar
21IT031

7 SKILLS FOR INTERVIEW

1.Resume Building

First and foremost thing you must have your proper resume. It shouldn't contain any information that you doesn't have knowledge over it

2.Conceptual understanding

Basic knowledge over all theoretical concepts with respect to placements must be prepared.

3.Basic coding knowledge

Students must posses basic coding knowledge atleast that includes strings,arrays,oops concepts etc.,

4.Profile development

Profiles of LinkedIn, GitHub, leetcode, hackerrank everything should be developed with a good certifications and points inorder to attract interviewer

5.Competitive coding knowledge

Competitive coding helps students to solve problems quickly with an efficient solution that add more values for candidates

6.Domain knowledge

Students must posses a good domain knowledge and do atleast 1 project over it that adds more value for it.

7.Communication knowledge

A good communication knowledge makes you to raise your status in a very good manner. Keen and knowledgeable replies raise you over other candidates.

9 Best AI Tools in 2023

1. ChatGPT - Super-Popular Chatbot
§ AI tool type: Chatbot
§ What it does: Answers questions. Solves problems.
§ Why we love it: ChatGPT offers an expansive, easy-to-use solution
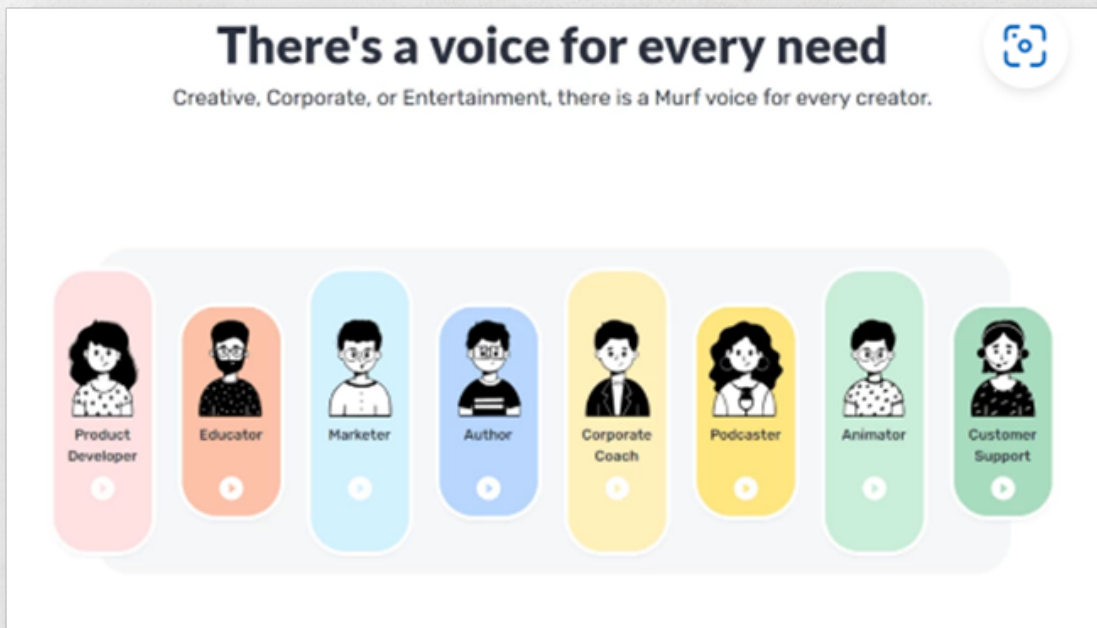§ Price: Free (with paid options)

2. Murf - AI Voice Generator
§ AI tool type: AI Voice Generator
§ What it does: Converts text to speech
§ Why we love it: Generates voices in up to 20 languages
§ Price: From $29/month or $228/year

There's a voice for every need
Creative, Corporate, or Entertainment, there is a Murf voice for every creator.

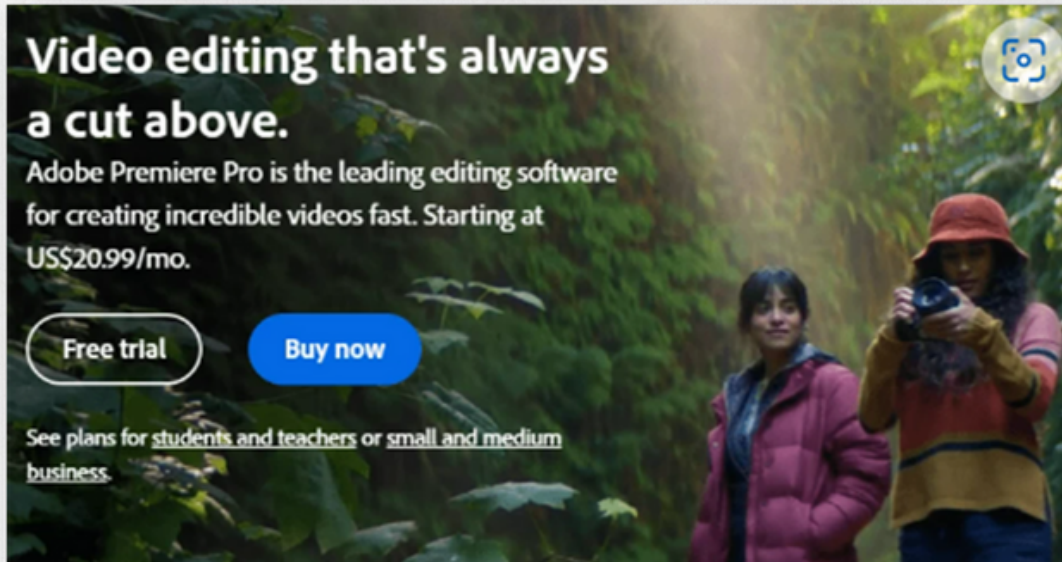Product Developer · Educator · Marketer · Author · Corporate Coach · Podcaster · Animator · Customer Support

3. Adobe Premiere Pro - Professional Video Editor
§ AI tool type: Video Editor
§ What it does: Leverages AI-powered video editing
§ Why we love it: Industry-standard brand with bleeding-edge technology
§ Price: From $20.99/month

4. Midjourney - AI Image Creation
§ AI tool type: Image Generator
§ What it does: Generates images in countless styles
§ Why we love it: Free option creates stunning art
§ Price: Free with paid options from $10

5. DALL-E 2 - AI Image Generator
§ AI tool type: Image Generator
§ What it does: Generates images
§ Why we love it: Made by the genius team at OpenAI
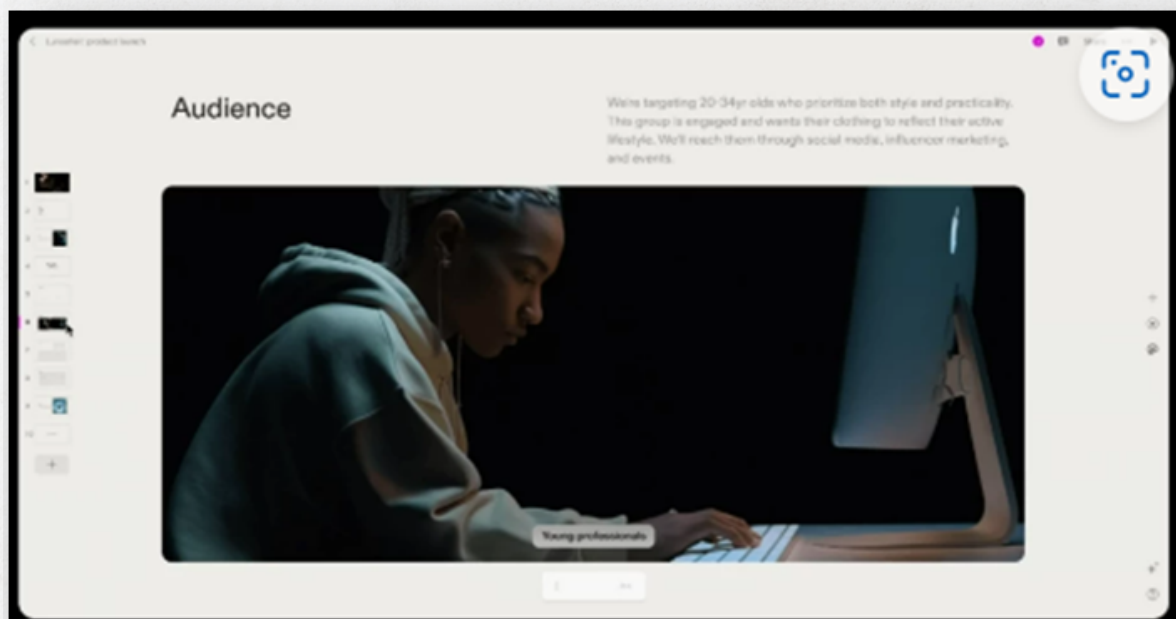§ Price: 115 Credits for $15

6. Tome - AI Storytelling Partner
§ AI tool type: Presentation Builder
§ What it does: Create text, images, and slides for presentations
§ Why we love it: Few tools offer such a robust service at such a low price
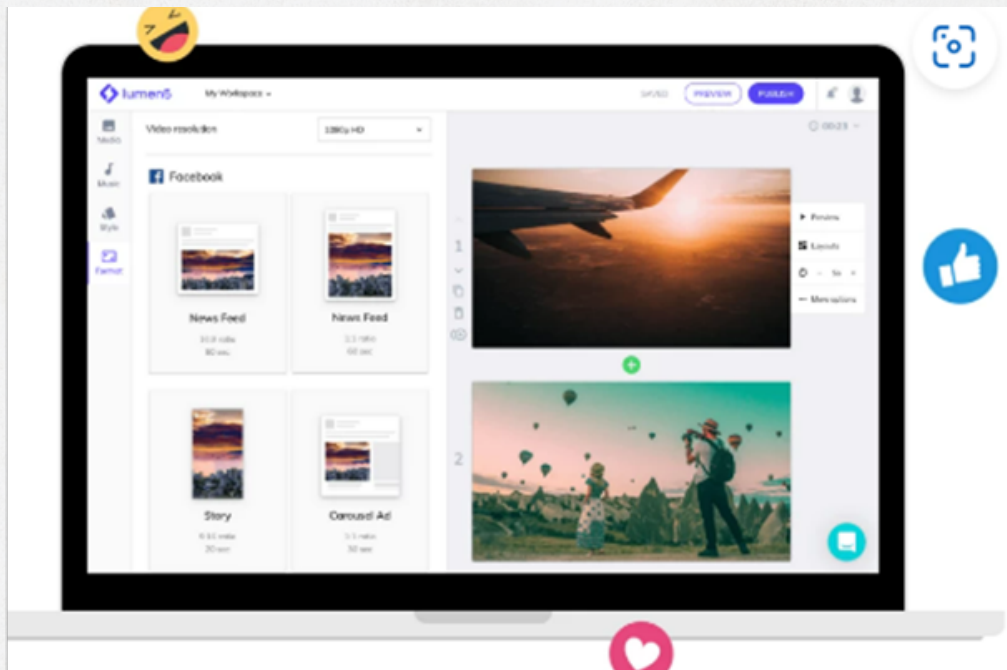§ Price: Free with paid options from $8/month

7. Lumen5 - AI-Powered Video Creation
§ AI tool type: Online Video Creator
§ What it does: Quickly makes videos
§ Why we love it: Simple online interface and works quickly
§ Price: From $29/month

8. GitHub Copilot - AI Coding Partner
§ AI tool type: AI Coder
§ What it does: Helps you code
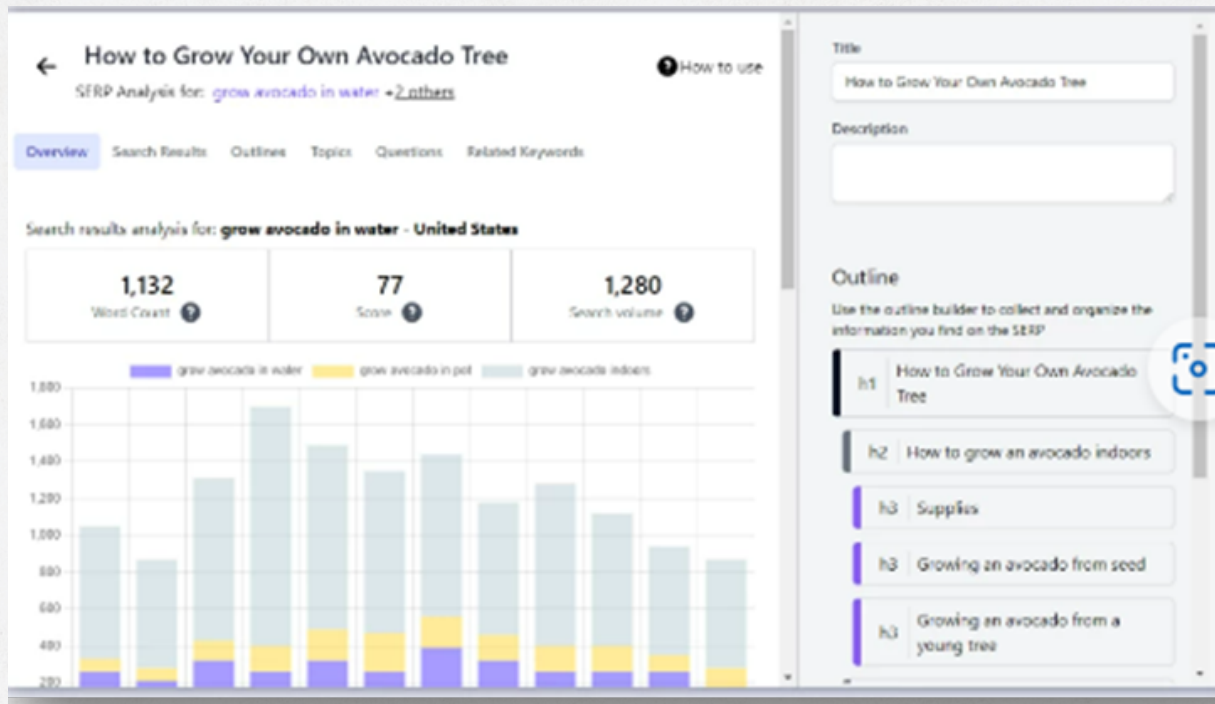§ Why we love it: If you've ever used GitHub for coding, you'll already understand.
§ Price: From $10/month

9. NeuralText - AI Writing Assistant
§ AI tool type: NLP Writing Assistant
§ What it does: Improves content
§ Why we love it: Cheaper than other AI SEO tools
§ Price: From $19/month (Check current pricing)

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Jobs AI will Replace Jobs it won't Replace

Everyone is discussing — and concerned about — how generative AI will impact the way we operate in the wake of ChatGPT's revolutionary release. The labour market is affected by new technologies, yet there is something unique about ChatGPT and programmes like Google Bard and Microsoft Bing AI that seems distinct.

Using algorithms, generative artificial intelligence (AI) creates fresh text, graphics, software code, Excel formulae, and even music from a straightforward text input. Applications that use generative AI, like ChatGPT, have been "trained" on vast volumes of data and can create material of human quality quickly.

8 Jobs AI is Likely to Replace

1.Content Marketers: With the advent of generative AI like Jasper, which creates articles and automates content marketing tasks, the jobs of content marketers who produce routine and low-quality content are under threat. However, AI can't replicate the creativity and originality of human-generated content.

2.Beat Journalists: AI is already transforming certain types of journalism, such as sports and financial reporting. Algorithms can generate compelling articles from data, but the nuance, investigative skills, and context provided by human journalists remain essential for deeper stories.

3.Graphic Artists: Tools like DALL-E 2 can generate stunning visual designs, impacting graphic artists specializing in quick and simple creations. While AI can automate certain design aspects, human expertise will continue to be sought for complex and high-end work.

4.Data Analysts: AI can handle lower-level data analysis tasks, from filtering data to creating spreadsheets. Although high-level analysis and decision-making will still require human involvement, routine tasks may be automated.

5.Programmers and Coders: AI tools like Copilot assist programmers by generating code quickly. While entry-level coding jobs might be affected, programmers can adapt as "prompt engineers" to optimize AI-generated code.

6.Lawyers: AI is transforming legal processes, such as document review and contract analysis. While AI can automate certain tasks, it enables lawyers to focus more on strategic thinking and critical analysis.

7.Warehouse Workers: In controlled environments like warehouses, robots are becoming more proficient, potentially reducing the need for human employees. Companies like Amazon are investing in robots to enhance efficiency.

8.Radiologists and Medical Diagnosticians: AI is excelling in medical image analysis, outperforming humans in some cases. However, professionals who collaborate with AI can enhance accuracy and efficiency in medical diagnostics.

8 Jobs that AI won't Replace

1. Skilled Tradespeople: Certified plumbers, electricians, and others in skilled trades possess a blend of knowledge, dexterity, and adaptability that are challenging for AI to replicate. Handling unique challenges and unexpected situations makes these roles highly human-dependent.

2. Construction Workers: Although AI aids in design and engineering, the physical aspects of construction, such as carpentry and bricklaying, still necessitate human skills. While modular construction gains traction, many on-site tasks demand human expertise.

3. Food Preparation and Serving: The intricacies of cooking and serving food involve a mix of sensory perception, creativity, and human touch. AI might find a place in the food industry, but the culinary arts and high-end dining experiences rely on human chefs' creativity.

4. Psychology and Counseling: AI-driven chatbots may assist with basic mental health counseling, but the depth of human interaction and relationship-building skills in counseling remains unmatched by technology.

5. Elementary School Teachers: Teaching young children requires a level of human interaction and empathy that AI can't replicate. While AI-powered learning tools benefit education, the importance of human teachers in early education is undeniable.

6. Professional Athletes and Coaches: The physical and mental prowess of athletes is unique to humans, making it difficult for AI to replace them. AI tools are beneficial for performance analysis and training recommendations, but the essence of coaching and athleticism is human-centric.

7. Drivers (For Now): Despite progress in autonomous vehicles, the unpredictability of real-world driving scenarios and the complexity of navigating public roads remain significant challenges. Full automation of driving is still a distant goal.

8. Truly Creative Thinkers: Entrepreneurial, artistic, and innovative roles require thinking beyond pre-defined patterns. While AI can assist in generating content, the depth of creativity, novel ideas, and human touch will remain indispensable.

**K.S.Gurucharan
21IT036**

Aptitude Questions

Question 1: Probability Two dice are rolled. What is the probability that the sum of the numbers on the two dice is 7?
 a) 1/6
b) 1/9
 c) 1/12
d) 1/36
Explanation: The correct answer is a) 1/6. There are 36 possible

Question 2: Number Theory How many positive integers less than 1000 are divisible by 6 but not by 9?
a) 83
 b) 84
c) 167
d) 166
Explanation: The correct answer is a) 83. To find the number of positive integers divisible by 6 but not by 9, we need to count the multiples of 6 and subtract the multiples of 18 (since they are also divisible by 9). There are $\lfloor 9996 \rfloor = 166 \lfloor 6999 \rfloor = 166$ multiples of 6, and $\lfloor 99918 \rfloor = 55 \lfloor 18999 \rfloor = 55$ multiples of 18. Therefore, the answer is $166-55 = 111 166-55 = 111$ numbers. However, we need to exclude the numbers that are divisible by both 6 and 18, which is $\lfloor 99936 \rfloor = 27 \lfloor 36999 \rfloor = 27$. Thus, the final count is $166-55+27 = 138 166-55+27 = 138$ numbers.

Question 3: Directions Starting from a point, if a person walks 20 meters south, then turns right and walks 30 meters, then turns left and walks 40 meters, and finally turns left again and walks 30 meters, in which direction is the person from the starting point?
a) North
 b) South
 c) East
 d) West
Explanation: The correct answer is c) East. The person initially moves south 20 meters, then the right turn makes them

face west while moving 30 meters, the left turn makes them face south while moving 40 meters, and the final left turn makes them face east while moving 30 meters.

Question 4: Directions A person starts at point A and walks 3 km towards the north. From there, the person turns 60 degrees clockwise and walks 6 km. Finally, the person turns 120 degrees anti-clockwise and walks 4 km. What is the distance and direction of the person from the starting point A?
 a) 6.2 km towards the east
 b) 6.2 km towards the west
c) 6.2 km towards the northwest
 d) 6.2 km towards the southwest
Explanation: The correct answer is c) 6.2 km towards the northwest. The person's path forms a triangle with sides of length 6 km, 4 km, and 3 km. Using the law of cosines, the angle opposite the 6 km side is approximately 64.8 degrees. This indicates that the person is moving towards the northwest direction.

Question 5: Blood Relations If Sarah's maternal grandfather is Sam, what is the relationship between Sarah and Sam?
 a) Granddaughter
 b) Mother
 c) Aunt
d) Niece
Explanation: The correct answer is d) Niece. Sarah's maternal grandfather is her mother's father, making him Sarah's uncle.

Aptitude Questions

Question 6: Blood Relations If Lucy's father's only brother has three children, what is the relationship between Lucy and those three children?
a) Niece/Nephew
b) Cousins
c) Siblings
d) Aunts/Uncles
Explanation: The correct answer is b) Cousins. Lucy's father's only brother is Lucy's uncle, and his three children are Lucy's cousins.

Question 7: Puzzles Three boxes – Red, Green, and Blue – contain three different types of fruits: Apples, Bananas, and Oranges. Each box contains only one type of fruit. If the following statements are true:
1.The Red box contains Bananas.
2.Oranges are in the box next to the box containing Apples.
3.The Green box does not contain Bananas.
Which fruit is in the Green box?
 a) Apples
b) Bananas
c) Oranges
Explanation: The correct answer is a) Apples. Since the Green box does not contain Bananas and Oranges next to the box containing Apples, the Green box must have Apples.

Question 8:Puzzles: Alice, Bob, Carol, and David need to cross a bridge at night. The bridge can only hold two people at a time. They each walk at different speeds: Alice takes 1 minute, Bob takes 2 minutes, Carol takes 5 minutes, and David takes 10 minutes. When two people cross the bridge, they must go at the slower person's pace. What is the shortest time they all can cross the bridge?
a) 17 minutes
 b) 19 minutes
c) 22 minutes
d) 24 minutes

Explanation: The correct answer is b) 19 minutes. Here's the optimal sequence: Alice and Bob cross (2 minutes), Alice goes back (1 minute), Carol and David cross (10 minutes), Bob goes back (2 minutes), Alice and Bob cross again (2 minutes), totaling 2 + 1 + 10 + 2 + 2 = 17 minutes.

Question 9: Logical Reasoning If all roses are flowers and some flowers fade quickly, which of the following must be true?
a) All roses fade quickly.
 b) Some roses fade quickly.
c) No roses fade quickly.
d) Some flowers are not roses.
Explanation: The correct answer is b) Some roses fade quickly. This is because if all roses are flowers, and some flowers fade quickly, it is possible that those fading flowers could be roses.

Question 10: Logical Reasoning If no doctors are engineers and some engineers are teachers, which of the following must be true?
a) All teachers are engineers.
b) Some teachers are doctors.
 c) No teachers are doctors.
 d) Some engineers are not doctors.

Explanation: The correct answer is b) Some teachers are doctors. Since no doctors are engineers and some engineers are teachers, it is possible for some teachers to be doctors.

Aptitude Questions

Question 11: Logical Reasoning If "BASIC" is coded as "DCFKD," how is "TABLE" coded?
 a) VCDDN
 b) VCGEO
c) UCFFN
d) UCGEO
Explanation: The correct answer is b) VCGEO. Each letter in the word is shifted by one position to the right in the alphabet. So, "TABLE" becomes "UCMFD."

Question 12: Critical Reasoning If all roses are flowers and some flowers fade quickly, which of the following must be true?
a) All roses fade quickly.
 b) Some roses fade quickly.
c) No roses fade quickly.
d) Some flowers are not roses
Explanation: Given that all roses are flowers and some flowers fade quickly, we can deduce that there are some flowers that are both roses and fade quickly. In other words, there must be an overlap between the set of flowers that are roses and those that fade quickly. This implies that there are some roses that fade quickly, making option b) "Some roses fade quickly" a true statement based on the given information.

S. Vibishnan
21IT116

National Cadet Corps

Unity and Discipline

A Dedication to Excellence!
The vibrant campus of Thiagarajar College of Engineering witnessed an awe-inspiring celebration of discipline and patriotism during the 77th Independence Day Celebration in 2023-2024. Our department Cadets showcased their unwavering dedication and active participation through the mesmerizing cane drill, precision rifle drill, and stirring flag march performances. The event exemplified the cadets' commitment to upholding the values of unity, integrity, and service to the nation. Their exemplary display of excellence serves as a reminder to all that dedication and participation are the pillars of success and progress in any Endeavor.

National Cadet Corps

Unity and Discipline

Participants

1. Sergeant Sivanuja Sivanandam
2. Lance Corporal Thangavignesh T
3. Lance Corporal Vibishanan S
4. Lance Corporal Subash S
5. Cadet Askar Ali SN
6. Cadet Abishek P
7. Cadet Bharath Vikash MM
8. Cadet Deepak Raj A
9. Cadet Bharath Kumar
10. Cadet Vinayagam M
11. Cadet Jeyasuriya S
12. Cadet Akilesh Kumar S
13. Cadet Harini S
14. Cadet Nivasshini R
15. Cadet Raja Rajeswari R
16. Cadet Ritika S
17. Cadet Sakthi Sarvani

National Cadet Corps

Unity and Discipline

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