SVKM's NMIMS

NMIMS EduGenAI

NMIMS Vision

To be a globally admired University by 2030

NMIMS Mission

Emerge as a Centre of Excellence, best in class in India and Asia, and yearning to be the best in the world by 2030

GenAI Guidelines and Policy

GenAI Faculty Development and Workshops

GenAI-Enhancing Teaching-Learning Process

GenAI- Progress Monitoring

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Preface

Warm greetings!

The fourth issue of EduGenAI Newsletter brings to you an interesting contributory review of an article titled ''Researchers Built an AI Scientist' published in the Journal 'Nature' along with an article on the role and impact of AI in the Hospitality Industry**.** This edition also covers the latest news and updates at university and global level.

In the **GenAI Tools Use-Cases section,** a new tool to create short videos on any academic topic has been introduced along with a platform which can help us create Rubrics.

Kindly share your feedback and suggestions as we continue to deliver content that supports you in your academic journey.

Happy reading!

In this edition

- **Review of ''Researchers Built an AI Scientist": An article published in "Nature"**
- **AI @ Hospitality Industry**
- **News and Events: October 2024**
- **GenAI Tools Use-Cases**
- **Latest Updates and Trends**

Review of "Researchers Built an AI Scientist": An article published in "Nature"

Dr. Ashwini Deshpande and **Dr. Rahul Maheshwari-NMIMS, Hyderabad**

A ground-breaking achievement has been realized: creating a fully automated AI scientist, marking a historic leap akin to the debut of GPT-1 in artificial intelligence. This innovation, developed through a collaboration between Sakana AI in Tokyo and academic laboratories across Canada and the UK, represents a significant advancement in research technology.

This **AI scientist** is designed to **handle the entire research process autonomously:**

- Reviewing existing literature on a given problem

- Formulating hypotheses

- Testing various solutions

- Writing research papers

- Conducting peer reviews of its own findings

While this development is remarkable, it does **have notable limitations**:

- Its application is currently restricted to AI science.

- It cannot perform physical lab work.

- It is capable of producing only incremental research rather than ground-breaking discoveries.

Perspectives on the AI Scientist's Impact:

A Landmark Achievement: This AI scientist represents a transformative leap beyond mere automation of laboratory tasks or data analysis. It is the first comprehensive solution capable of generating hypotheses, conducting experiments, writing papers, and critically reviewing its own work.

Rapid Evolution Expected: The pace of development for AI scientists is anticipated to be swift. This creates significant opportunities for investment, and many companies and funding bodies are likely to become involved, driving further advancements in the field.

Increased Automation of Routine Work: The automation of routine tasks in science, akin to trends in manufacturing, is becoming inevitable. This will streamline many aspects of research and education, making scientific workflows more efficient.

Accelerated Incremental Research: Routine research tasks, which currently span years, will be completed in weeks. This efficiency will address routine gaps in research and free up time

for more complex and innovative projects.

Shift towards Creative Research: As AI handles routine research, the focus of scientific inquiry will shift towards more creative and exploratory projects. Routine research will become less significant, encouraging more ground-breaking and imaginative work.

AI and Creativity: AI, at present, cannot generate truly creative ideas or extend beyond its learned data. Human scientists will remain essential for their ability to drive creative breakthroughs and address complex, novel challenges.

Benefits to Human Scientists: The automation of routine research will greatly benefit human scientists by liberating time for more creative and high-impact work. With over 90% of current scientific work involving routine tasks, AI's role in handling these tasks will allow researchers to focus on innovation.

Impact on Education: The advent of AI scientists will revolutionize scientific education by reducing the time spent on repetitive tasks and increasing focus on advanced research topics. Educational programs will need to adapt, emphasizing skills that complement AI's capabilities, such as creative problem-solving and critical thinking.

Enhanced Research Statistics: Automated experiments will lead to better statistical accuracy in research studies, addressing current limitations due to human resource constraints. This improvement will elevate the quality and reliability of scientific findings.

Reduced Overwork and Improved Work-Life Balance: The automation of routine tasks will significantly improve work-life balance for researchers. PhD students and postdoctoral researchers, who often work long hours, will benefit from a reduction in repetitive tasks, potentially allowing them to end their workday at a more reasonable hour.

Emerging Technologies: The journey of innovation begins with prototypes often encountering bugs and challenges. Recent advancements such as **DeepMind's AlphaProof and AlphaGeometry2**, as well as **Cognition AI lab's Devin**— the first fully autonomous AI software engineer—are paving the way.

It can be said that the introduction of the AI scientist represents another significant step forward in this transformative era.

AI @ Hospitality Industry

Dr. P. Manikandan, NMIMS, Navi Mumbai

Hospitality Industry is well known for absorbing new technologies, in this line it is now jumpstarting in to the Artificial Intelligence (AI) revolution. There are multiple ways the industry can absorb and streamline guest services through AI, in this article the author discusses a few to give an insight in to AI's uses and what is coming in the future.

AI **is analyzing guests flow and provides demand and supply data**, which in turn helps in planning the pricing of room tariffs and other hospitality services even more accurately than before.

AI is sending meaningful responses to guest comments, which will reduce the workload of the customer loyalty staff, currently they only have to review the comments and responses, the lengthy human responses to comments days are slowly diminishing.

AI is identifying from the previous data collection on **guest preferences** on food options, room options, wellness package options, tour options and providing customized suggestions to individual guests.

Robots are **meeting and greeting guests** and showing directions to guest facilities. Robotic waiters, **Robotic bartenders** had become a common appearance in food service facilities. AI based **multilingual guest services** are increasingly used to communicate with guests from foreign countries.

There is a lot more influence of AI happening in the Hospitality Industry, the above is only a sample of its applications and innovation. Like the internet brought in changes in the world through various innovations in multiple sectors, AI is expected to deliver double the effect of Internet to humanity. **Food research labs are extensively working on human facial movements** during food tasting and mapping likes and dislikes of various tastes in various cultures. Food is judged though Taste and appearance, AI might soon become the Chef who approves the food through appearance and give suggestions to customers as well as creators.

The **Hospitality industry is fast catching up with the developments** as it is one of the basic needs of humanity and each innovation can gather scale in less time to bring in change. Let us keep updating the developments to apply AI in our areas of teaching and learning.

News and Events

Topic: Integrating AI in Education: Insights from ATAL-FDP on Teaching and Research with Perplexity AI Overview Series 1 | Episode 5

Day, Date and Time: Thursday, October 24, 2024 @ 04:00 P.M.

The October edition of faculty lounge was conducted by the NMIMS Chandigarh campus covering the insights on the ATAL FDP organized by the campus along with a brief overview of **Perplexity AI.**

Key Highlights

- **Welcome and Introduction**:
  - **Dr. Rashmi Nagpal**, **I/c Director, Chandigarh Campus** opened the faculty lounge session. She acknowledged the support and guidance from the Vice Chancellor and introduced the objective of the session.

- **FDP Overview**:
  - The Faculty Development Program (FDP) took place from September 9-14 and was fully sponsored by AICTE with a funding of 3.5 lakhs.
  - Out of 180 institutions that applied, only ten were selected to host the program, with Chandigarh being one of the chosen campuses due to the relevance of its topic.
- **Program Theme and Engagement**:
  - The FDP focused on integrating Artificial Intelligence (AI) into education, specifically covering insights on teaching and research. This program attracted 40 participants from across India.
  - **Dr. Mohit Pahwa** and **Dr. Aditya Bakshi** provided an overview of all the sessions conducted during the FDP and corresponding learnings.
  - It was stated that the FDP received positive feedback on all aspects, including accommodation, sessions, and activities like paper presentations and an industrial visit.

- **Content and Tools Discussed**:
  - o Dr. Mohit Pahwa introduced AI tools such as Perplexity AI, which has gained popularity as a search engine alternative. Resource persons also shared research papers and Harvard articles to aid learning.
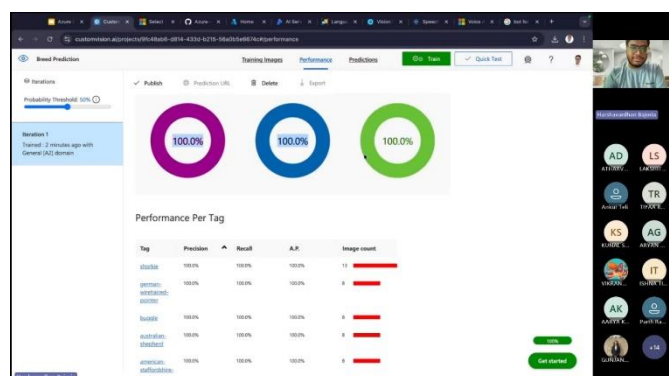- **Challenges and Reflections**:
  - o The speakers shared insights on the extensive preparation required for the FDP and the challenges faced, such as coordinating with participants and managing the schedule.
  - o Dr. Mohit Pahwa provided closing remarks, inviting attendees to reach out for guidance on the FDP application process or further information on AI tools in academia.

The meeting concluded with gratitude and a sense of accomplishment for successfully hosting a beneficial and well-received FDP.

Generative AI Events at NMIMS, Navi Mumbai in the Month of October

Topic: Generative AI Essentials session

The TechCider Club at NMIMS Navi Mumbai hosted an engaging **Generative AI Essentials session** on September 29, 2024 led by Mr. Harshavardhan Bajoria, Associate Product Manager at Unstop, as part of the CodeVengers Bootcamp. The session introduced participants to Generative AI concepts through hands-on demonstrations using Azure openAI.

Attendees explored how to **build custom vision models and integrate generative capabilities in speech, language, and vision technologies**, such as real-time speech-to-text, video translation, and custom content moderation. Mr. Bajoria shared valuable insights into enhancing AI model accuracy and practical applications, creating an interactive and informative experience for all.

Topic: Pixel Palette AI Art Competition

The Pixel Palette AI Art Competition was organized by the SOMASA Student Council, NMIMS, Navi Mumbai on October 8, 2024, showcased the **fusion of human creativity** and **Generative AI using LEONARDO.AI**. Through prompt engineering, participants guided AI to generate digital art across themes like social media logos, serenity vs. chaos, and product design.

The event offered students an engaging platform to explore AI's role in creative fields, successfully blending technology with artistic expression.

Looking ahead, SOMASA plans more such innovative events to inspire learning through cutting-edge technologies.

Topic: Innovation with GenAI Solutions

IdeaHub 2.0: The **Ultimate Tech Challenge organized during STME, NMIMS Navi Mumbai Techfest Ignite 7.0** on October 18- 19, 2024 brought together innovative minds to explore Generative AI solutions for real-world issues. Participants tackled diverse problem statements, from AI-powered personalized learning and virtual call agents to early mental health detection and real-time fraud prevention.

Exciting innovations like **AI-driven health advisors**, **personalized gaming algorithms**, and **crop yield optimization tools** showcased the transformative potential of AI across sectors. The event highlighted how GenAI can revolutionize industries, driving creativity, efficiency, and ethical solutions for a better future.

Generative AI Event at School of Branding and Advertising, Mumbai in the Month of October

Topic: From Code to Canvas: How AI is Revolutionizing the Creative Process

NMIMS School of Branding and Advertising discussed the significant importance of AI in creativity by hosting **a panel discussion** on Saturday, 5th October 2024, **'From Code to Canvas: How AI is Revolutionizing the Creative Process'** featuring industry leaders **Dharmesh Suryavanshi (Brewd Media), Udhav Parab (Interactive Avenues), and Shrey Doshi (Yellow Creative Agency).** The industry experts discussed creative AI tools, for idea generation, personalization, production efficiency. The discussion painted a vivid tapestry of the future, in AI augmented creativity, where AI and human creativity can intertwine to craft new forms of artistic expression.

Generative AI Article

Topic: The Great Ind'AI'n Paradox: Article in the Newspaper

CS (Dr.) Swapnil Shenvi, Assistant Professor - Finance at Kirit P. Mehta School of Law published an article titled "The Great Ind'AI'n Paradox" in The Highland Post, a leading English Daily Newspaper in Shillong, Meghalaya on 29th October 2024.

The article discusses the need for educators to use Generative AI to enhance the teaching-learning process.
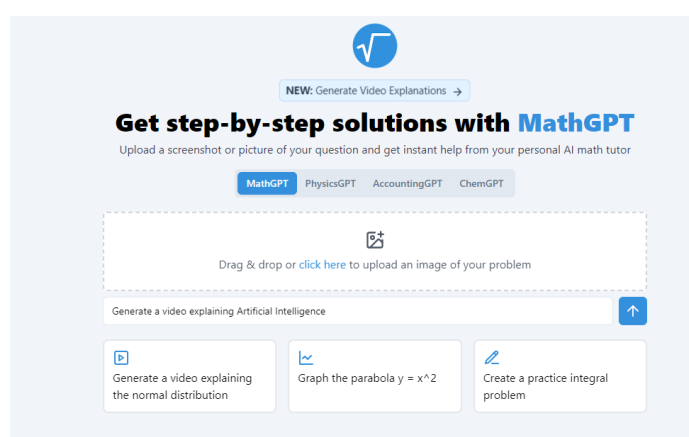
The Link for the article is: **Link**

GenAI Tools Use-Cases

Generating a Short Video on a Specific Topic in the Syllabus
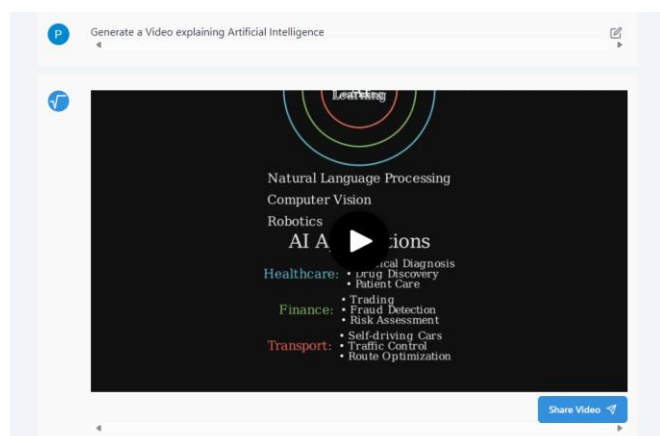
Step 1: Login/Create Account 🔑
- Go to [MathGPT | AI Math Solver & Calculator](#) website.
- You may Sign in by creating a new account or use this feature without signing-in.

Step 2: Write the prompt in the provided space as shown in the following image.

- **It will take a few seconds to generate a video (would depend on the complexity).**

Step 3: The generated video can be shared through any platform using the link available in Share Video Tab shown as follows.

The Link: [The Link of the Video](#)

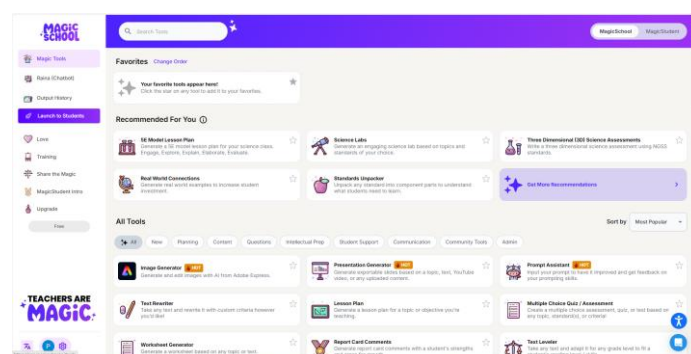**Note: Currently, there is no provision for downloading the video in the free account.**

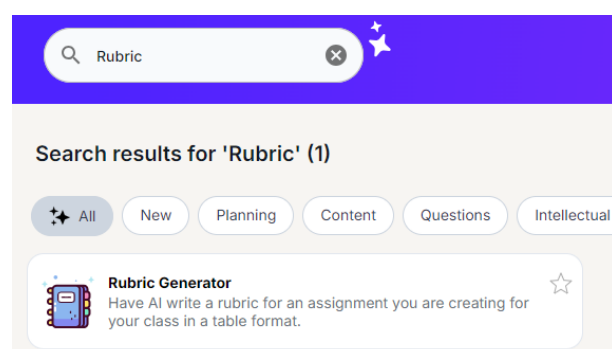## Generating Rubrics using Magic School AI

Step 1: Login/Create Account 🔑
- **Go to [MagicSchool - AI Built for Schools](#) website.**
- **Sign up as an educator.**

Step 2: Use the Search space to explore the tool for Rubrics Generation.

- **Type "Rubric" in the given space.**
- **You may explore multiple other tools for Free.**

Step 3: Click on the "Rubric Generator"

Step 4: Fill the necessary details for generating the Rubrics

- **This includes grade level, Point Scale, Objective, Description of the Task, etc.**

Step 5: Modify the Rubrics by prompting or copy the same to be used for required purpose.

Note: There are many more tools on this platform. Feel free to explore.

Latest Updates and Trends

- **Generative AI is being used in Corporate Budgets.** With tangible productivity gains, companies are significantly increasing budgets for generative AI projects. Applications span customer service to supply chains, where businesses now anticipate substantial returns on these investments as they integrate further into critical workflows. **Read more at: [Generative AI: Here's the latest research from the Forum | World Economic Forum](#).**

- **Generative AI in Defence Applications.** "A **generative AI that can boost the performance of electronic warfare** drones has been developed by scientists in China's defence industry. This large language model (LLM), similar to ChatGPT, can **command a drone equipped with electronic warfare weapons** to attack enemy aircraft radar or communication systems." **Read more at: [J-20 designer arms electronic warfare drones with generative AI | South China Morning Post.](#)**

- "Generative AI to add $359 bn-$438 bn to India's GDP by FY30" says RBI DG Patra. **Read more at: [https://www.business-standard.com/industry/banking/generative-ai-to-add-359-bn-438-bn-to-india-s-gdp-by-fy30-rbi-dg-patra-124111300732_1.html](#).**

- "Sharan Hegde's 1% Club, a start-up backed by Nikhil Kamath **lays off 15%** of employees as **Perplexity and AI make jobs redundant.**" **Read more at: [Sharan Hegde's 1% Club lays off 15% of employees as Perplexity and AI make jobs redundant.](#)**

- **What will happen to artists in the age of ever evolving Generative AI Tools and Platforms? Read more about it at:** [https://techcrunch.com/2024/11/05/as-generative-ai-gets-better-what-will-happen-to-artists/](#).
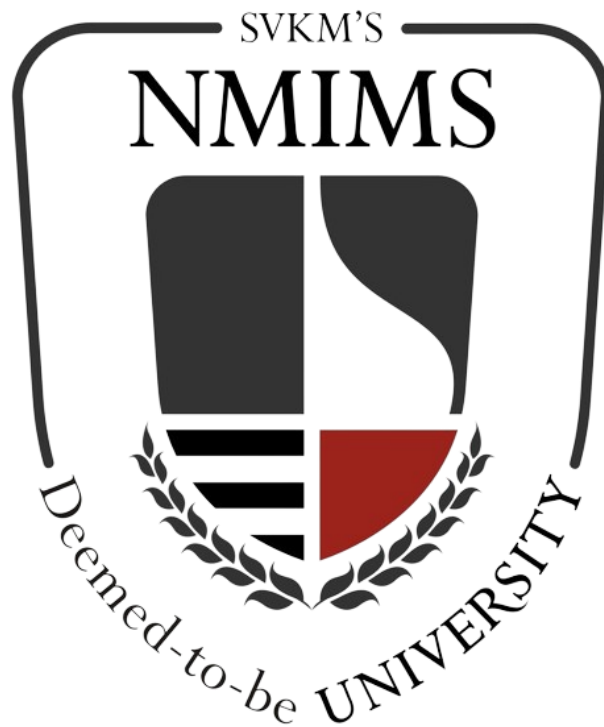
Reference Links
- [The-state-of-ai-in-early-2024-final.pdf](#)
- [MagicAI/Professional Development](#)

Stay tuned for more updates on Generative AI at NMIMS University!

With warm regards,
EduGenAI Newsletter Team

Kindly send your **feedback and contributions** on **GenAI use-cases to your respective school or campus representatives in the newsletter team or genai.newsletter@nmims.edu before the 25th of every month!**