

**COMMUNITY CONNECT: TEACHING STUDENTS THROUGH NEW AGE
TECHNOLOGIES**

21GNP301L - COMMUNITY CONNECT REPORT 2024-2025

Submitted by

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in

COMPUTER SCIENCE ENGINEERING



**DEPARTMENT OF COMPUTING TECHNOLOGIES
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SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

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BONAFIDE CERTIFICATE

Certified that 21GNP301L Community Connect report titled “**COMMUNITY CONNECT: TEACHING STUDENTS THROUGH NEW AGE TECHNOLOGIES**” is the bonafide work of “**Shaik Abdul Azeez [RA2211003011633]**” who carriedout the community work under **Dr. Kishore’s Ratnam E.M High School**. Certified further, that to the best of my knowledge the work reported herein does not form any other report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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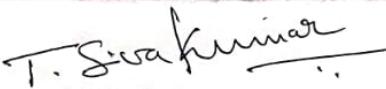


Dr.KISHORE'S RATNAM E.M HIGH SCHOOL

OPP.UNION BANK, DARGAMITTA, NELLORE

Internship Certificate

This is to certify that Mr. SK. Abdul Azeez Register no: RA2211003011633, student in CSE CORE from SRMIST KATTANKULATHUR Chennai, has done his internship from 13.06.2024 to 13.07.2024 successfully at Dr. Kishore's Ratnam E.M High School. During the period of his internship programme with us he was found punctual, hardworking and inquisitive. We wish him success in future endeavors and recommend his skills and abilities.


Principal

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OBJECTIVES OF THE COMMUNITY CONNECT

The primary objective of the community connect course was to introduce and educate students at Dr. Kishore's Ratnam E.M High School about the fundamentals and advancements in artificial intelligence (AI). Over the span of four weeks, structured 2-hour sessions were conducted each week, covering key aspects of AI. The services provided during this course included: 1) Explaining the basic concepts of AI, such as what AI is and how it functions, giving students a foundational understanding; 2) Discussing the significant advancements in AI and its applications across various sectors such as healthcare, education, finance, and entertainment, helping students grasp how AI is transforming industries worldwide; 3) Finally, addressing the potential harms of AI, such as ethical concerns, job displacement, and security risks, and providing students with important "do's and don'ts" related to the responsible use of AI.

The decision to choose Dr. Kishore's Ratnam E.M High School for this initiative stemmed from the institution's proactive approach to education and its emphasis on fostering technological literacy. The school presented an ideal platform, as its student body was enthusiastic, eager to learn, and receptive to new technologies. Furthermore, the school's emphasis on incorporating innovative teaching methods aligned with the goals of the community connect course, making it an excellent choice for engaging young minds. Through these sessions, students were not only introduced to the technical aspects of AI but were also encouraged to think critically about its societal impact, preparing them to navigate the future .

TABLE OF CONTENTS

S. No	Content	Page No.
1	INTRODUCTION OF THE ORGANIZATION	
2	WEEK-WISE REPORT	
3	TANGIBLE LEARNING	
4	STUDENT'S CONTRIBUTION	
5	CONCLUSION	

CHAPTER 1

INTRODUCTION OF THE ORGANIZATION

Dr. Kishore's Ratnam E.M High School, located in Nellore, Andhra Pradesh, is an esteemed educational institution known for its commitment to academic excellence and holistic student development. Established with the vision of nurturing young minds and preparing them for the challenges of the modern world, the school has continuously evolved to provide students with quality education. The institution boasts a diverse student body, well-trained faculty, and modern infrastructure, including advanced computer labs and digital classrooms. Over the years, the school has earned a reputation for embracing modern teaching methodologies and integrating them with traditional educational values, ensuring students receive a well-rounded education.

The school follows a comprehensive curriculum that balances academic rigor with extracurricular activities, encouraging students to excel in both academics and personal development. As a forward-thinking institution, Dr. Kishore's Ratnam E.M High School has always been open to innovative educational programs and partnerships, which help students expand their knowledge beyond textbooks. This focus on innovation and future-oriented learning makes the school an ideal environment for introducing concepts like artificial intelligence (AI), which are becoming increasingly relevant in today's world.

Brief about the Nature of Activities at Dr. Kishore's Ratnam E.M High School

Dr. Kishore's Ratnam E.M High School is not only focused on imparting knowledge but also on nurturing critical thinking, creativity, and problem-solving skills among its students. The school organizes various activities aimed at promoting intellectual curiosity and fostering leadership qualities. These include science fairs, academic competitions, cultural events, and workshops on emerging technologies. By incorporating a mix of theoretical and practical learning, the school encourages students to apply their knowledge in real-world scenarios, helping them develop a deeper understanding of the subjects they study.

In addition to a strong academic focus, the school also places great emphasis on character-building activities. Students are encouraged to participate in community service programs, which promote social responsibility and empathy. Extracurricular activities like sports, music, and art are integral to the school's approach, ensuring that students develop a wide range of skills.

The school's progressive nature is reflected in its willingness to embrace new educational initiatives. For instance, the administration is proactive in seeking partnerships with external organizations, educational bodies, and professionals to provide students with exposure to the latest developments in various fields. This forward-thinking approach has made the school a hub for modern education, allowing students to be well-prepared for the challenges of higher education and the evolving job market.

Need for Choosing Dr. Kishore's Ratnam E.M High School and the Type of Service

The decision to choose Dr. Kishore's Ratnam E.M High School for the community connect course was driven by several factors. First and foremost, the school's progressive outlook and commitment to embracing new technologies made it an ideal candidate for introducing the concept of artificial intelligence to young students. With AI becoming an integral part of the future workplace and everyday life, it is crucial that students gain a foundational understanding of this technology early on. Dr. Kishore's Ratnam E.M High School, with its modern infrastructure and tech-savvy student body, provided the perfect environment for this learning experience.

The community connect course aimed to provide students with a comprehensive introduction to AI, a subject that is not typically covered in the standard school curriculum. AI is rapidly transforming industries such as healthcare, finance, education, and entertainment, making it essential for the next generation to understand its basic concepts and applications. The course was structured to cover various aspects of AI, from its fundamentals to its real-world applications, advancements, and ethical implications.

The choice of Dr. Kishore's Ratnam E.M High School was also influenced by the school's openness to new ideas and innovative teaching methods. The administration's willingness to collaborate and integrate AI education into their extracurricular activities showed their dedication to preparing students for the future. This aligns with the objectives of the community connect course, which was designed to empower students with knowledge and encourage them to think critically about technology's role in society.

The type of service provided during the course was educational and aimed at knowledge dissemination. The sessions were designed to be interactive, encouraging students to ask questions and engage with the material. The first week focused on explaining what AI is and how it works, giving students a clear understanding of the basic concepts. In the second and third weeks, the course covered advancements in AI and its applications across various sectors, helping students appreciate the global impact of this technology. The final week was dedicated to discussing the potential harms of AI, such as job displacement and ethical concerns, and providing students with guidelines on the responsible use of AI.

In conclusion, the decision to choose Dr. Kishore's Ratnam E.M High School for the community connect course was based on the school's forward-thinking approach, its commitment to embracing modern educational initiatives, and its readiness to expose students to cutting-edge technologies like AI. The course not only provided students with valuable knowledge about AI but also aligned with the school's broader goals of preparing students for the future by equipping them with the skills and understanding necessary to navigate an increasingly tech-driven world.

CHAPTER 2

WEEK-WISE REPORT

Week 1: Introduction to AI (What is AI?)

The first week focused on introducing the students to the concept of artificial intelligence (AI). The session began with a brief overview of technological advancements, followed by an explanation of what AI is and how it differs from traditional computing. Key topics discussed included the definition of AI, its history, and the basic structure of AI systems, such as machine learning, neural networks, and algorithms.

To make the lesson engaging for young students, I used real-life examples such as voice assistants (e.g., Siri or Alexa) and AI-powered chatbots to illustrate how AI functions in everyday life. I explained how AI systems learn from data and how they can improve over time without explicit programming. I also discussed the difference between narrow AI, which is designed for specific tasks, and general AI, which can perform multiple tasks like a human.

Number of Hours Spent:

2 hours (1 session of 2 hours)

Outcomes:

By the end of the session, students gained a basic understanding of AI and its workings. They were able to differentiate between AI and traditional programming and could identify everyday applications of AI. The students showed interest and curiosity, asking insightful questions about how AI learns and what makes it "intelligent." This session successfully set the foundation for more complex topics in the following weeks.



Fig 1: Week 1 Interacting with students and introduction of the topic

Week 2: AI Advancements and Applications (Part 1)

In the second week, I delved deeper into the advancements in AI and how it is applied across different industries. The first half of the session focused on the current state of AI development, particularly in sectors like healthcare, education, and finance. I explained how AI is being used to solve complex problems in medical diagnostics, personalize education through adaptive learning technologies, and automate financial processes such as fraud detection and trading.

Interactive activities were incorporated, including discussions on how AI could potentially improve their school experience. I asked the students to think about areas in their daily lives where AI could be applied, encouraging them to brainstorm creative uses of AI in their community or future careers.

Number of Hours Spent:

2 hours (1 session of 2 hours)

Outcomes:

The session sparked excitement and engagement among the students. They were able to recognize the wide range of applications of AI and how it impacts various industries. Many students expressed a desire to explore AI-related career paths, particularly in healthcare and technology. This session effectively expanded their understanding of the potential of AI beyond everyday tools, fostering an appreciation for its transformative power.

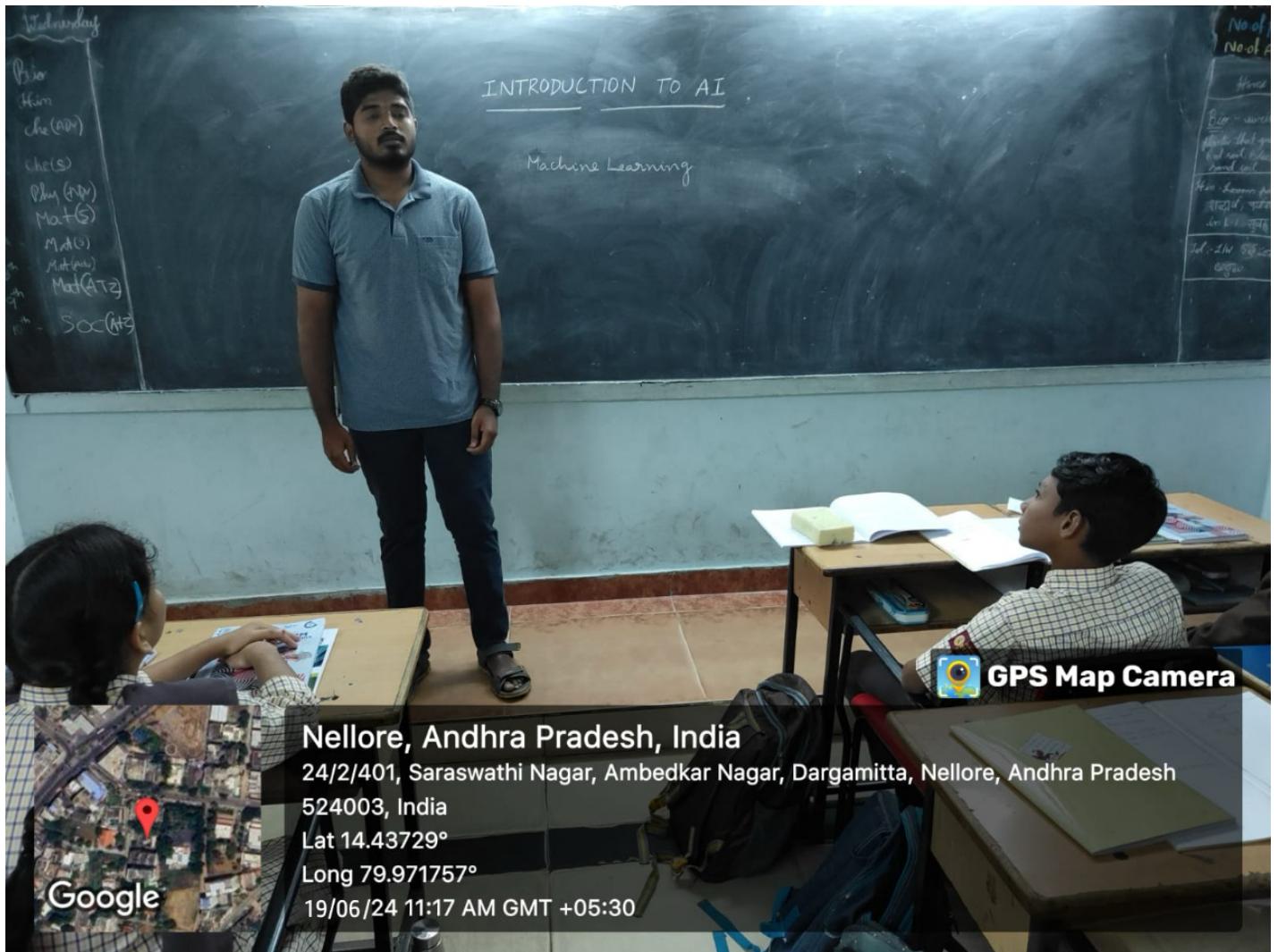


Fig 2: Week 2 continuation of the previous week's class

Week 3: AI Advancements and Applications (Part 2)

Building on the previous week's content, this session explored AI applications in industries such as entertainment, transportation, and agriculture. I introduced students to AI technologies like self-driving cars, recommendation systems (e.g., Netflix or YouTube), and AI-powered drones used in precision farming. These examples helped students understand how AI can improve efficiency, enhance user experience, and tackle global challenges like food security.

To make the lesson more interactive, I divided the class into groups and asked each group to present an AI solution for a real-world problem. This group activity not only helped them apply the knowledge they had gained but also encouraged teamwork and creative thinking.

Number of Hours Spent:

2 hours (1 session of 2 hours)

Outcomes:

By the end of this session, students could clearly articulate how AI impacts diverse sectors, ranging from entertainment to agriculture. The group activity fostered collaboration, and students demonstrated creative thinking in suggesting AI-driven solutions for environmental and social problems. They became more confident in discussing AI's future and its possibilities.



Fig 3: Enhancing the students' knowledge the benefits of AI

Week 4: Harms of AI and Ethical Considerations

The final week focused on the harms and ethical concerns related to AI. I began the session by discussing some of the key risks of AI, such as job displacement due to automation, the potential for AI to be biased or discriminatory, and privacy concerns arising from AI surveillance systems. The conversation then moved to broader ethical questions, such as whether AI systems should have the same rights as humans, who should be held accountable for AI decisions, and how society can regulate AI to ensure its benefits outweigh its risks.

The latter part of the session was dedicated to the “Do’s and Don’ts” of AI. I provided students with guidelines on how to use AI responsibly and the importance of ethical considerations in AI development. Students were encouraged to think about how they would build ethical AI systems if they became AI engineers in the future.

Number of Hours Spent:

2 hours (1 session of 2 hours)

Outcomes:

This session had a profound impact on the students, as they began to grasp the importance of responsible AI use. They expressed concerns about privacy and job displacement, demonstrating a deep understanding of AI’s societal implications. The discussions around ethics encouraged them to think critically about the moral responsibilities that come with developing and using AI technologies. By the end of the course, students not only understood the technical aspects of AI but were also able to engage in thoughtful discussions about its broader consequences.



Fig 4: week 4 Interacting with the students



Fig 5: Asking the students what they learned in the class

CHAPTER 3

TANGIBLE LEARNING

Summary of the Student's Learning

Over the course of the four-week community connect program, the students at Dr. Kishore's Ratnam E.M High School made significant progress in understanding the basics of artificial intelligence (AI) and its applications. The carefully designed curriculum aimed to introduce them to AI in an accessible manner, while also challenging them to think critically about its implications.

In the first week, the students were introduced to the fundamental concepts of AI. Through simple explanations and relatable examples, they learned what AI is and how it works. They quickly grasped the distinction between traditional computing and AI, understanding that AI systems learn and improve autonomously, unlike typical software programs that follow explicit instructions. This basic framework laid a solid foundation for more advanced topics discussed in later weeks.

During the second and third weeks, the students explored the advancements of AI and how these technologies are being utilized in different industries. The lessons highlighted the role of AI in healthcare, education, finance, agriculture, entertainment, and transportation. As the students learned about specific AI applications—such as AI-powered medical diagnostics, adaptive learning systems, self-driving cars, and recommendation algorithms—they were able to connect these technologies with real-world challenges and solutions. This exposure broadened their perspectives, enabling them to see AI as more than just a tool, but rather as a transformative force reshaping industries and everyday life.

In the final week, students delved into the ethical and societal implications of AI, an important area that often goes overlooked in general AI education. They learned about the potential risks associated with AI, including job displacement, privacy concerns, and bias in AI algorithms. This part of the course encouraged students to think beyond the technical aspects of AI and consider its long-term impact on

society. The conversations about ethical AI development and the responsible use of AI technology were particularly engaging, with students showing a strong interest in understanding how AI could be regulated to ensure it serves humanity in a positive way.

Benefits to the End Users

The end users in this community connect course were primarily the students at Dr. Kishore's Ratnam E.M High School. The course provided tangible benefits to these students by introducing them to a field that is not typically covered in traditional school curricula, preparing them for future educational and career opportunities in technology and beyond.

1. Enhanced Technological Literacy:

One of the most significant benefits for the students was the enhancement of their technological literacy. In an increasingly tech-driven world, having a basic understanding of AI gives students an edge in navigating future academic and professional spaces. The course introduced them to fundamental AI concepts, which not only sparked their curiosity but also helped them understand how these technologies are embedded in their daily lives. From voice assistants like Siri to recommendation systems on platforms like YouTube, students began to recognize AI's pervasive role in shaping their digital experiences. This new level of awareness empowers them to be more conscious consumers of technology.

2. Exposure to Career Pathways:

The sessions on AI advancements and applications across various industries gave students a glimpse into potential career paths. The exposure to real-world AI applications, particularly in sectors like healthcare, education, and entertainment, helped them understand how AI is revolutionizing industries. This knowledge is invaluable, as it allows students to explore career opportunities in AI and related fields, such as data science, machine learning engineering, and AI ethics.

3. Development of Critical Thinking Skills:

Throughout the course, students were encouraged to think critically about the implications of AI. The interactive discussions on ethical issues, such as privacy, bias, and job displacement, helped students develop a balanced view of AI's benefits and risks. By engaging in group activities where they had to propose AI-driven solutions to real-world problems, students were able to exercise problem-solving and creative thinking. These skills are crucial for success in any field, particularly as technology continues to evolve at a rapid pace.

4. Understanding of Ethical AI Use:

One of the course's most valuable outcomes was the students' understanding of the ethical considerations surrounding AI. In a world where technology is advancing faster than regulations can keep up, it is crucial for the next generation to understand the moral responsibilities that come with creating and using AI technologies. The discussions on AI ethics and the "dos and don'ts" of responsible AI use helped students appreciate the importance of fairness, transparency, and accountability in AI systems. This knowledge equips them to become not only users of AI but also advocates for ethical practices in the development and deployment of AI technologies.

In summary, the tangible learning from the community connect course extended beyond just understanding AI concepts. It provided students with critical thinking skills, an awareness of ethical considerations, exposure to potential career paths, and a sense of empowerment to engage with and shape the future of technology. By equipping these young minds with a solid foundation in AI, the course significantly contributed to their personal and intellectual growth, preparing them.

CHAPTER 4

STUDENT'S CONTRIBUTION

Shaik Abdul Azeez (Roll No: RA2211003011633)

As the sole participant in this community connect project, I, Shaik Abdul Azeez, took full responsibility for planning, preparing, and delivering each session over the span of four weeks at Dr. Kishore's Ratnam E.M High School. My objective was to ensure that the students gained a foundational understanding of artificial intelligence (AI) while also engaging them in interactive and thoughtful discussions about the technology's implications.

Week 1 Contribution:

In the first week, I introduced the students to the concept of AI, focusing on its definition, history, and basic workings. I prepared a detailed presentation using real-life examples to simplify the technical aspects of AI for young learners. My teaching strategy included interactive discussions and relatable analogies to explain complex topics such as machine learning and neural networks. I ensured that every student was engaged by encouraging them to ask questions and participate in discussions. I spent extra time preparing the material to ensure it was appropriate for the students' level of understanding and used visual aids to help illustrate abstract concepts.



Fig 6: Introducing myself to the students

Week 2 Contribution:

During the second week, I focused on the advancements in AI and its real-world applications across various sectors. I designed a session that highlighted AI's role in healthcare, finance, and education, using interactive examples to show how AI is transforming these industries. I also conducted a brainstorming session where students discussed how AI could improve various aspects of their school life. I spent considerable time researching practical examples that would resonate with the students, making sure they could relate the applications of AI to their daily lives. This session required me to break down complex advancements into simple, digestible ideas, which I accomplished by using familiar analogies and examples.



Fig 7: Child asking me a question

Week 3 Contribution:

In the third week, I continued discussing AI's applications, covering sectors like entertainment, transportation, and agriculture. I designed an interactive group activity that required students to come up with AI solutions for real-world problems, encouraging them to think creatively and apply the knowledge they had gained. As the facilitator, I guided each group through the brainstorming process, offering suggestions and ensuring that they understood the basic principles of AI that could be applied to their ideas. This week's session required significant preparation in terms of creating an activity that would both challenge and engage the students.

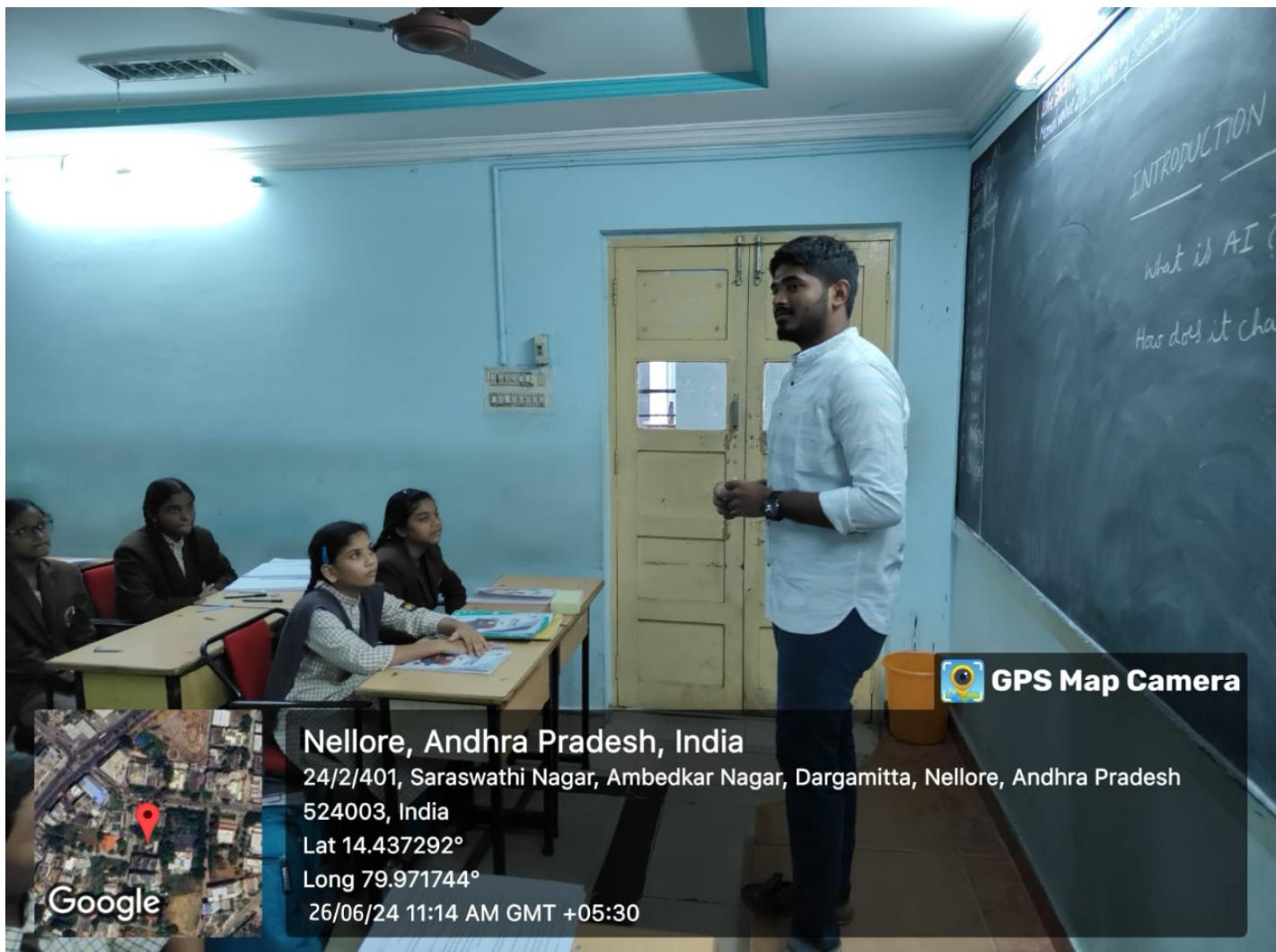


Fig 8 : Teaching the Benefits of AI

Week 4 Contribution:

In the final week, I addressed the harms of AI and ethical considerations. I created a detailed presentation that covered topics like job displacement, privacy issues, and bias in AI algorithms. I structured the session to foster critical thinking, asking students to reflect on the ethical responsibilities associated with AI. I also prepared guidelines on the “do’s and don’ts” of AI, ensuring that students left the course with a balanced understanding of both the benefits and risks of the technology. This session was particularly important as it encouraged students to think beyond the technical aspects of AI and consider its societal impacts.

Throughout the course, I ensured that each session was well-researched, thoughtfully structured, and interactive, allowing students to engage with the material and apply what they had learned. My role extended beyond just delivering lectures; I actively facilitated discussions, encouraged participation, and provided personalized attention to students who needed extra help.



Fig 9: Children listening attentively

CHAPTER 5

CONCLUSION

The completion of the community connect course at Dr. Kishore's Ratnam E.M High School has been an enriching experience, both for the students and for me as the facilitator. Over the four-week period, I had the privilege of introducing young minds to the world of artificial intelligence (AI), a topic that is shaping the future in profound ways. This course allowed the students to grasp not only the technical aspects of AI but also its broader societal and ethical implications.

Through structured lessons, interactive activities, and discussions, the students gained a foundational understanding of what AI is, how it works, and where it is being applied across various industries. Each week built upon the previous one, gradually expanding their knowledge and deepening their engagement with the subject. The curriculum was designed to be both informative and inspiring, encouraging students to think critically about how AI impacts their lives and how it might shape the future.

For the students, this course opened a new avenue of learning, sparking curiosity and a desire to explore potential career paths in AI-related fields. It provided them with valuable skills in problem-solving, critical thinking, and teamwork, which will benefit them in their academic and professional journeys. Additionally, the discussion on the ethical considerations of AI helped them understand the importance of responsible use and development of technology. From my perspective, this experience was equally rewarding. It reinforced my passion for AI and teaching, while also honing my ability to communicate complex concepts in an accessible way. Watching the students' excitement grow week by week reaffirmed the importance of introducing such subjects at an early age.

In conclusion, the community connect project has not only empowered the students with knowledge of AI but also equipped them with the mindset to approach technology thoughtfully and responsibly. It stands as a testament to the power of education in shaping the innovators and thinkers of tomorrow.