REPORT

PRAGATI ENGINEERING COLLEGE

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1-378, A.D.B.Road, Surampalem, NearPeddapuram-533437

"INSIDE GEMINI FUTURE"

Date: 12-12-2025

Day: Friday

Turing Club organised by the Dept. of CSE – AI&ML of Pragati Engineering College in association with Career Guidance Cell is organizing a seminar on "**INSIDE GEMINI FUTURE"** as part of Industry 4.0.

<u>Attendance list :</u>

Content Delivered in the Event:

Seminar Report on Google Gemini

1. Introduction

The rapid advancement of Artificial Intelligence (AI) has led to the development of systems that go beyond traditional text-based intelligence. Modern AI systems are expected to understand, reason, and generate content across multiple data formats such as text, images, audio, video, and code. In this context, a seminar on **Google Gemini – The Future is Gemini** was presented to provide an in-depth understanding of Google's next-generation multimodal AI platform.

Google Gemini represents a significant milestone in AI research and development. The seminar aimed to familiarize students and faculty with the architecture, features, tools, and real-world applications of Google Gemini, highlighting how it transforms learning, research, creativity, and software development.

2. Objective of the Seminar

The primary objectives of the seminar were:

- To introduce the concept of multimodal Artificial Intelligence
- To explain the architecture and capabilities of Google Gemini
- To highlight the unique features that differentiate Gemini from traditional AI models
- To demonstrate practical use cases for students, researchers, and developers
- To create awareness about AI tools that enhance productivity and creativity

3. Overview of Google Gemini

Google Gemini is a new class of AI models built from the ground up to be **multimodal**. Unlike conventional AI models that are trained mainly on text, Gemini is trained simultaneously on text, images, audio, video, and code. This unified training approach enables Gemini to understand complex and nuanced information in a more natural and human-like manner.

Gemini is designed to be flexible and scalable, making it suitable for a wide range of applications, from education and research to software development and creative design. Its ability to operate seamlessly across different data types positions it as a powerful and future-ready AI platform.

4. Unique Features of Google Gemini

One of the major highlights of the seminar was the discussion on the unique features of Google Gemini that set it apart from other AI systems.

4.1 Image Generation

Google Gemini supports advanced image generation capabilities that allow users to create highly detailed and realistic visuals using simple natural language prompts. This feature is particularly useful for generating diagrams, illustrations, icons, and conceptual visuals with minimal effort.

The seminar also introduced **Gemini Nano (Nano Banana)**, a lightweight on-device AI model developed by Google. Gemini Nano enables fast and efficient image generation directly on supported devices, even in offline mode. It is optimized for low power consumption and is ideal for quick creative tasks such as generating sketches, stickers, and simple illustrations.

4.2 Benefits of Image Generation for Students

The image generation capability of Gemini offers several benefits for students:

- Instant creation of diagrams and charts for academic notes
- Simplified visual explanations of complex concepts
- Support for creative project work and presentations
- Offline accessibility, enabling learning anytime and anywhere
- Enhanced engagement through visual learning

5. Google NotebookLM

Another important component discussed in the seminar was **Google NotebookLM**, an AI-powered research and learning assistant developed by Google Labs.

NotebookLM is designed to work exclusively with the sources uploaded by the user, such as PDFs, Google Docs, lecture notes, articles, and research papers. It builds a personalized AI model that helps users understand, summarize, and explore their own documents without relying on external or unverified information.

5.1 Key Features of NotebookLM

- Source-based question and answer system with accurate citations
- Automatic summaries, chapter overviews, and key points
- Generation of study guides, flashcards, and sample exam questions
- Cross-document analysis to identify connections between multiple files
- Assistance in preparing reports, research outlines, and presentations

NotebookLM is especially beneficial for students and researchers as it promotes deep learning, accurate understanding, and efficient study practices.

6. Gemini Canvas

The seminar also covered **Gemini Canvas**, an interactive and collaborative workspace within Google Gemini. Gemini Canvas allows users to write, code, and create content side-by-side with AI assistance.

6.1 Features of Gemini Canvas

- Supports writing documents and presentations
- Enables coding and debugging in an interactive environment
- Assists in UI/UX design and prototyping
- Provides real-time editing, refinement, and suggestions
- Integrates text, code, visuals, and structured layouts in one workspace

A typical Canvas workflow involves sketching ideas on paper or a tablet, uploading them to Gemini Canvas, generating structured UI or code, and then refining the output further with AI assistance.

7. Use Cases of Gemini Canvas

The seminar highlighted several practical use cases of Gemini Canvas:

7.1 Work Use Cases

- Refining project proposals and professional documents
- Creating presentations and process documentation
- Writing structured reports and technical content

7.2 Coding and Learning Use Cases

- Developing custom utility applications
- Creating a Pomodoro timer with visual countdowns and alerts
- Building interactive web-based tools
- Designing classic memory card games with difficulty levels and timers

Sample prompts were demonstrated to show how natural language instructions can be converted into functional code and applications.

8. Video Generation with Gemini Veo 3

The seminar introduced **Gemini Veo 3**, a video generation capability that enables the creation of AI-generated videos.

8.1 Benefits for Computer Science Students

- Visual demonstrations of algorithms and data structures
- Quick understanding of AI and ML concepts through videos
- Creation of project explanation videos for hackathons and final-year projects
- Development of animated UI/UX prototypes
- Conversion of technical documentation into animated explainers

Video generation using Gemini Veo 3 enhances conceptual clarity and improves communication of technical ideas.

9. Conclusion

The seminar on **Google Gemini – The Future is Gemini** provided valuable insights into the next generation of Artificial Intelligence. By integrating multimodal understanding with powerful tools such as Image Generation, NotebookLM, Canvas, and Video Generation, Google Gemini offers a comprehensive AI ecosystem for learning, research, creativity, and development.

The seminar successfully enhanced participants' awareness of modern AI technologies and their applications. It encouraged students to explore AI-driven tools to improve productivity, creativity, and problem-solving skills. Google Gemini stands as a promising platform that represents the future direction of Artificial Intelligence.

PHOTOS:

PEC / Admin / Circular / 2025 / Turing CLUB

Date: 10- 12-2025

All the staff, Pragati Turing club coordinators, Third year Students are informed that a seminar on "**Inside Gemini Future** " is being organized by Turing club & IAENG in association with career Guidance cell. The details are given below.

Date: 12-12-2025
Time: 02:30 PM to 03:30 PM
Venue: Conference Hall
Faculty Co-Ordinator: Mrs.L.Yamuna,

Student Co-Ordinator: VEEDHI SRI SAI KOUMUDI
            (III -year CSE (AI&ML)-23A31A42F8)

Speaker: Mrs ORUGANTI PRADEEP KUMAR
.   III -year CSE (AI&ML)-23A31A42C2

Faculty coordinator   **HoD-CSE (AI&ML)**

Copy to:

1) Chairman /All Directors / Vice President for kind information.
2) Vice Principal/Dean T&P for information.
3) All HoDs are requested to circulate among your staff members.
4) Convener-Career Guidance cell
5) Office File.