

Directorate of Online and Distance Education (DDOE)

# SEMINAR-1

code : 23OMC107

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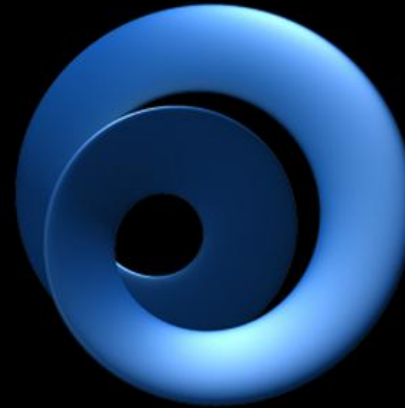
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Course: MCA



# Google Gemini



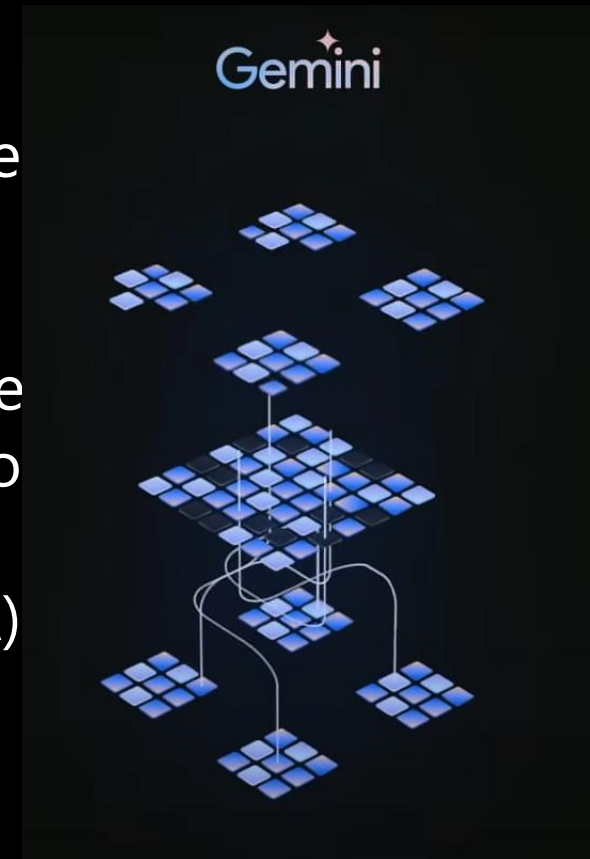
**DEEPMIND**

# A Multimodal Revolution in AI

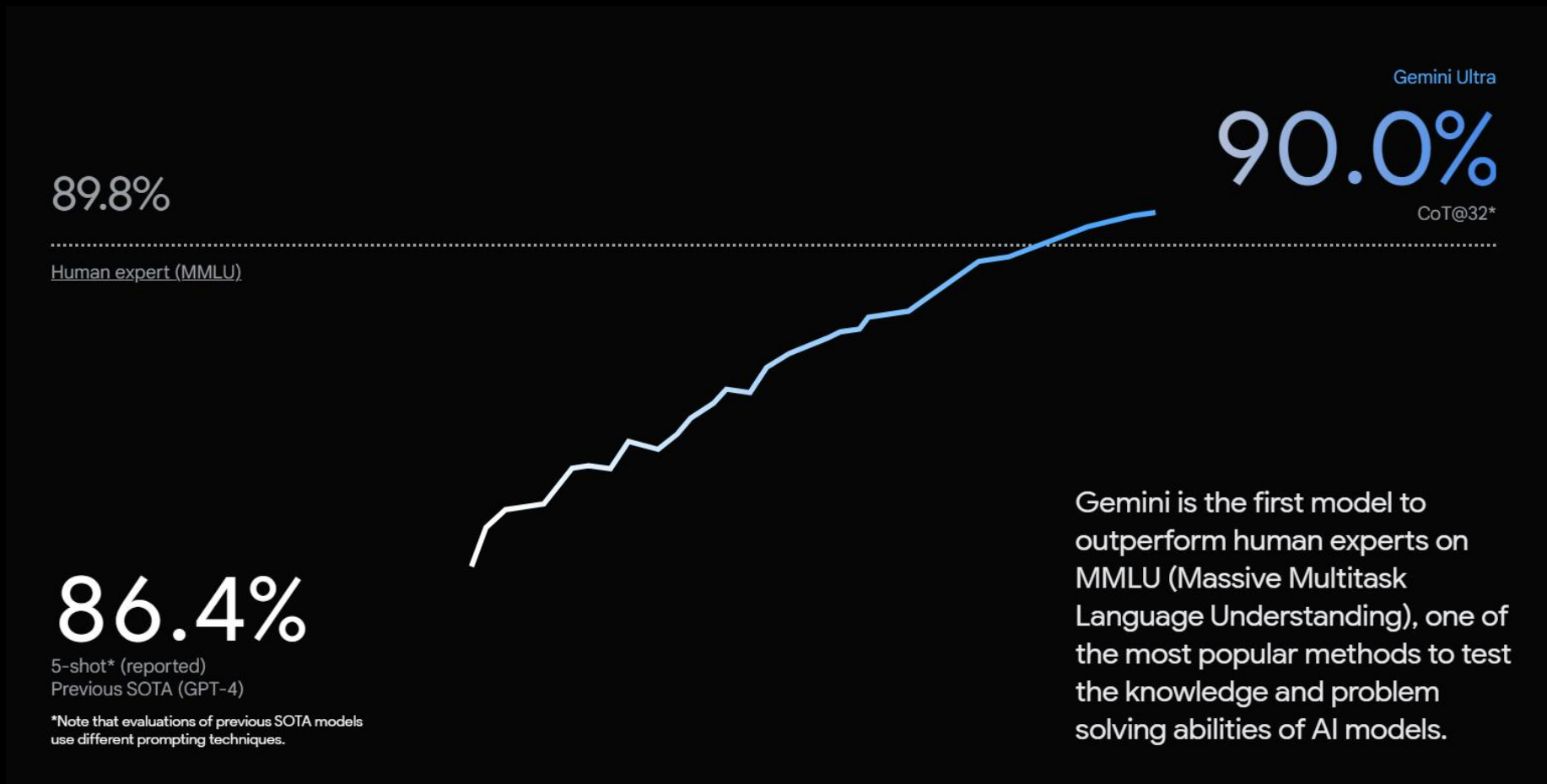
# Introduction

## - What is Gemini?

- Gemini is a family of multimodal large language models developed by Google DeepMind
- Gemini can understand and generate natural language across different modalities, such as text, speech, and vision
- Gemini is the successor to LaMDA and PaLM 2 (SOTA)



# What's special about Gemini?

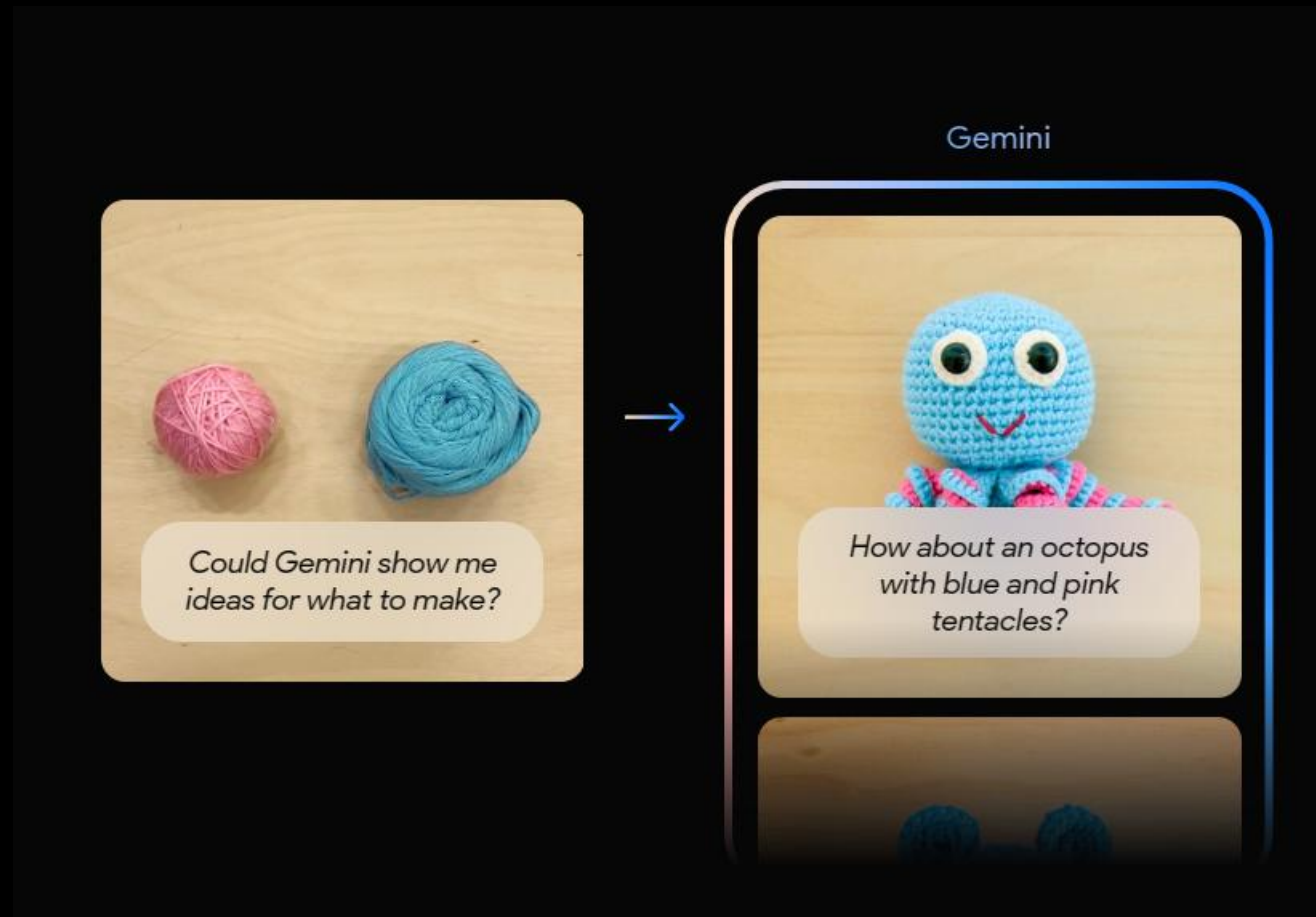


# Gemini Ultra, Pro, and Nano

- Three innovative models of Gemini, each tailored for different needs and scenarios
- **Gemini Ultra:** The ultimate solution for complex and demanding tasks, with the highest performance and capacity
- **Gemini Pro:** The versatile solution for diverse and scalable tasks, with a balanced trade-off between power and efficiency
- **Gemini Nano:** The efficient solution for simple and on-device tasks, with a minimal footprint and low energy consumption

# Multimodality At Core

- Gemini can understand, operate across, and combine various information formats
- This enables tasks like reasoning visually across languages



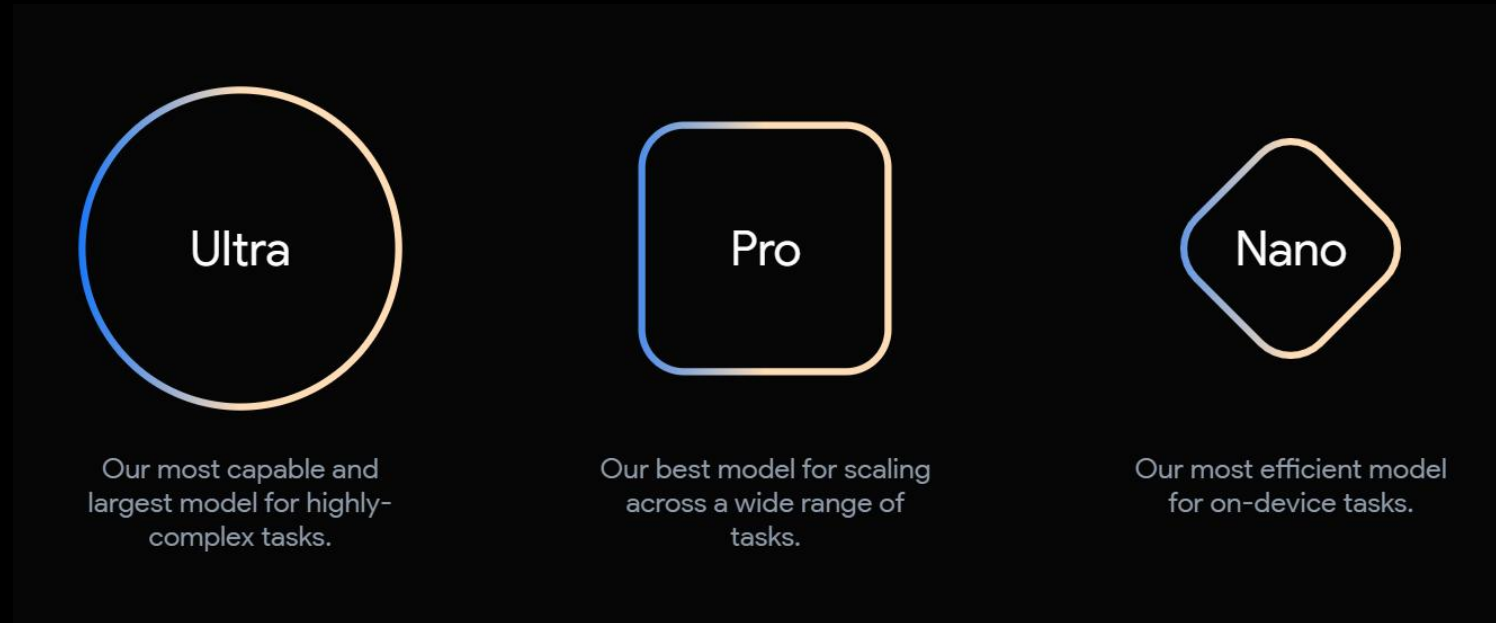
# Beyond Text Generation

- Translation between languages.
- Generating code based on natural language descriptions.
- Creating captions for images and videos.
- Summarizing video content.



How about a pig with blue ears?

# Gemini: flexibility



- Supports various devices and platforms, from data centers to mobile phones
- Optimizes performance and resource utilization, adapting to different hardware capabilities and constraints



# Responsible AI

- Google develops AI responsibly, with Gemini's comprehensive safety evaluations
- Gemini checks for bias and toxicity in AI models and outputs
- Google researches potential risk areas and applies rigorous testing techniques

# Collaboration & Openness

- How Google leverages the collective wisdom of internal and external experts to develop Gemini
- How Google works with partners to ensure the robustness and fairness of Gemini models

# The Road Ahead

- Google's plans for Gemini:

- Enhance capabilities to handle more complex tasks, such as natural language understanding, computer vision, and multimodal reasoning.
- Optimize efficiency and reduce resource requirements, such as memory, computation, and energy consumption.
- Address ethical considerations and ensure responsible use, such as privacy, fairness, accountability, and transparency.

# Conclusion:

## A New Era of AI

- Gemini: a landmark achievement in AI
- Understand the world through multimodal perception
- Interact with the world through natural language and actions
- Learn from the world through self-supervised and reinforcement learning

**Thank You !**