

**Al-Mustaqbal University**  
**College of Science**



# AI in Our Daily Lives

*Lecture 5*

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# What you will learn

A quick roadmap for the lecture



## 1. AI basics

What AI means and where students already meet it every day.



## 2. Smartphones

How phones use AI for security, writing, photos, and personalization.



## 3. Assistants

What Siri and Google Assistant do and why voice interfaces matter.



## 4. Issues

Benefits, privacy, limitations, and future trends.

By the end, students should be able to explain how simple phone actions are powered by AI.

- Identify common AI features on a phone
- Describe how a voice assistant processes a request
- Compare benefits and challenges of daily AI use
- Give real examples from school, home, and travel

# What is artificial intelligence?

A practical definition for students

**Artificial intelligence** is when computer systems perform tasks that usually need human abilities such as recognizing patterns, understanding language, learning from data, or making predictions.

**AI ≠ magic**  
**It is software + data + models**

 **Recognize**

Faces, objects, voices, handwriting

 **Understand**

Meaning in speech, text, and user intent

 **Predict**

Next word, best route, recommended action

 **Improve**

Performance becomes better with more data

# Where do we meet AI every day?

Students often use AI before they realize it



## Navigation apps

Route prediction and traffic



## Social media

Feed ranking and recommendations



## Shopping

Product suggestions and search



## Banking

Fraud detection and alerts



## Education

Translation, captions, writing help



## Phones

Voice assistants and photo enhancement

***Smartphones are one of the most visible and familiar places where AI appears in daily life.***

# Why smartphones are now AI devices

The phone is not just hardware; it is a system that senses, predicts, and assists

Modern phones combine cameras, microphones, sensors, and AI software to deliver more personalized and more automated experiences.

- Voice interaction
- Photo and video enhancement
- Writing and translation help
- Device personalization and suggestions



on-device AI

assistant features

# Four common AI features inside a phone



## Face unlock

Computer vision compares your face to a stored template so you can unlock quickly.



## Smart camera

AI sharpens images, adjusts light, and recognizes scenes for better photos.



## Predictive text

Language models suggest words, tone, and corrections while you type.



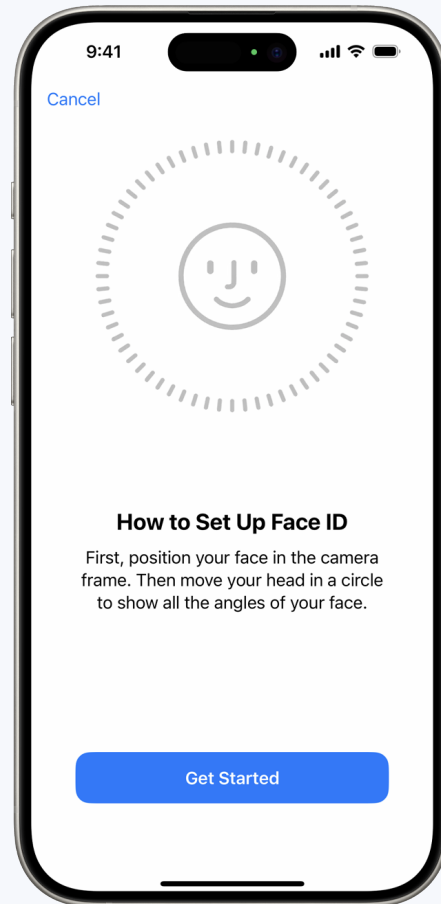
## Battery & suggestions

The phone learns habits and surfaces timely actions.

**Big idea: the same phone can use different AI techniques at the same time — vision, language, prediction, and personalization.**

# Example 1: face recognition

A familiar AI feature for security and login



## What happens?

- The camera captures facial features
- Software compares them with a saved identity pattern
- If the match is strong enough, the phone unlocks or approves an action



## Why it matters

Fast, convenient, and useful for sign-in and payments.

## Example 2: the smart camera

AI helps the phone decide how a photo should look

AI can assist the camera by adjusting:

- Brightness and exposure
- Focus and stabilization
- Scene recognition (food, faces, night, landscape)
- Sharpening and color balance

**Result: users take better pictures even without changing manual settings.**



## Example 3: predictive text and writing help

### When you type...

I will be late because

the

I'm

my

The keyboard predicts likely next words by learning patterns from large amounts of language data and your context.

- Speeds up typing
- Corrects mistakes
- Can rewrite tone or grammar in newer AI tools



### Good teaching point

This is AI for language — the system predicts text, not just buttons.

# Example 4: battery optimization and personalization

## What the phone can learn

- Which apps you open most
- When you usually charge the phone
- Which contacts or locations matter most
- What shortcuts you often tap



### **Battery:**

Optimizes power usage by giving energy to the most important apps.

*Example:* Reducing background activity of rarely used apps.



### **Suggestions:**

Provides smart suggestions based on your daily phone usage.

*Example:* Suggesting Google Maps when you usually travel to work.



### **Priority:**

Keeps important notifications and contacts visible.

*Example:* Notifications from family or close friends appear first.



### **Routine:**

Automates repeated actions based on your habits.

*Example:* Turning on Wi-Fi automatically when you arrive home.

# What is a virtual assistant?

A virtual assistant is software that helps a user complete tasks through spoken or typed requests.

- It listens or reads input
- It figures out the user's intent
- It returns an answer or performs an action

## A simple model

User request



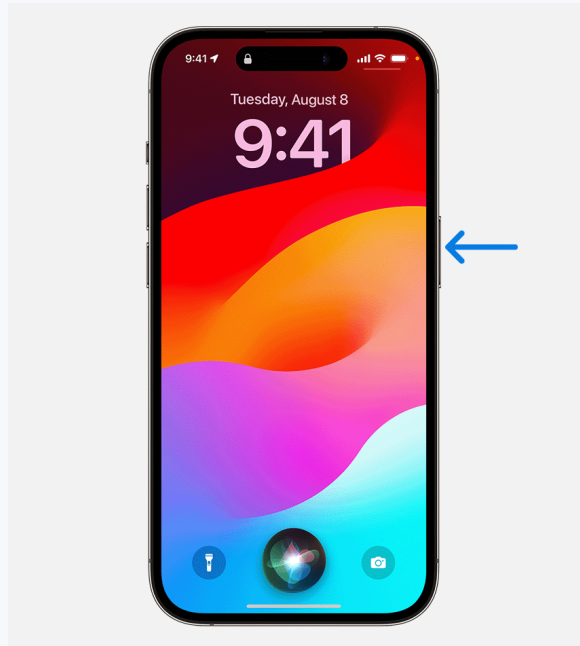
Assistant understands



Action or answer

# Siri on iPhone

A voice-first assistant built into Apple devices



- Start with “Siri” or “Hey Siri”
- Can answer questions and do everyday tasks
- Can call, text, set alarms, and interact with apps

 **Example**

“Set a timer for 3 minutes.”

 **Example**

“Text Mom I am on my way.”

 **Example**

“Open Maps to school.”

# Google Assistant

A personal helper for search, reminders, and smart actions

## Typical things it can do:

- Ask questions and get quick answers
- Make calls or send texts
- Schedule reminders or tasks
- Provide directions and local information





# What can assistants do in daily life?

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## Communication

Send messages or place a call



## Time management

Set alarms, timers, and reminders



## Information

Answer questions and search the web



## Navigation

Give directions and traffic help



## Entertainment

Play music, news, or podcasts



## Control devices

Run smart-home actions or routines

# How a voice request works

A simple pipeline students can remember

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- **Wake / Speak:** The user activates the assistant with a wake word or button.  
*Example: Saying \***“Hey Google.”***

- **Speech-to-Text:** The system converts spoken words into text.  
*Example: “Set alarm for 7 AM” becomes written text.*

- **Understand Intent:** The AI understands the meaning of the request.  
*Example: Detecting that the user wants to **set an alarm.***

- **Action:** The phone performs the requested task.  
*Example: Opening the clock app and setting the alarm.*

- **Response:** The assistant returns the result to the user.  
*Example: Saying **“Alarm set for 7 AM.”***

# Step 1: speech recognition

Turning sound waves into words



- The microphone records the user's speech
- Software identifies likely words from the audio pattern
- Noise, accents, and speed can make recognition harder

## Step 2: natural language processing (NLP)

Understanding what the words mean

NLP helps the assistant move from the sentence itself to the user's real intention.

 **User says**

“Set an alarm for 6 a.m. tomorrow.”

 **NLP finds**

Action = set alarm  
Time = 6 a.m.  
Date = tomorrow

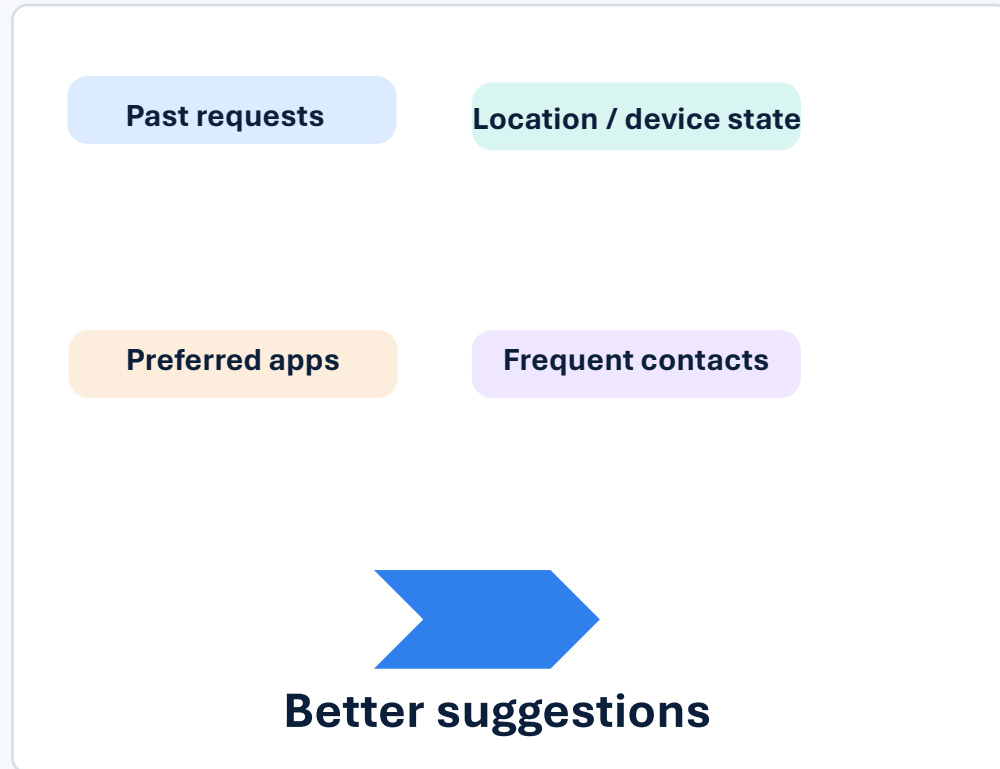
 **System does**

Creates the alarm and confirms it to the user.

**In short: NLP turns language into structure and meaning.**

# Step 3: machine learning and context

Getting better predictions from patterns



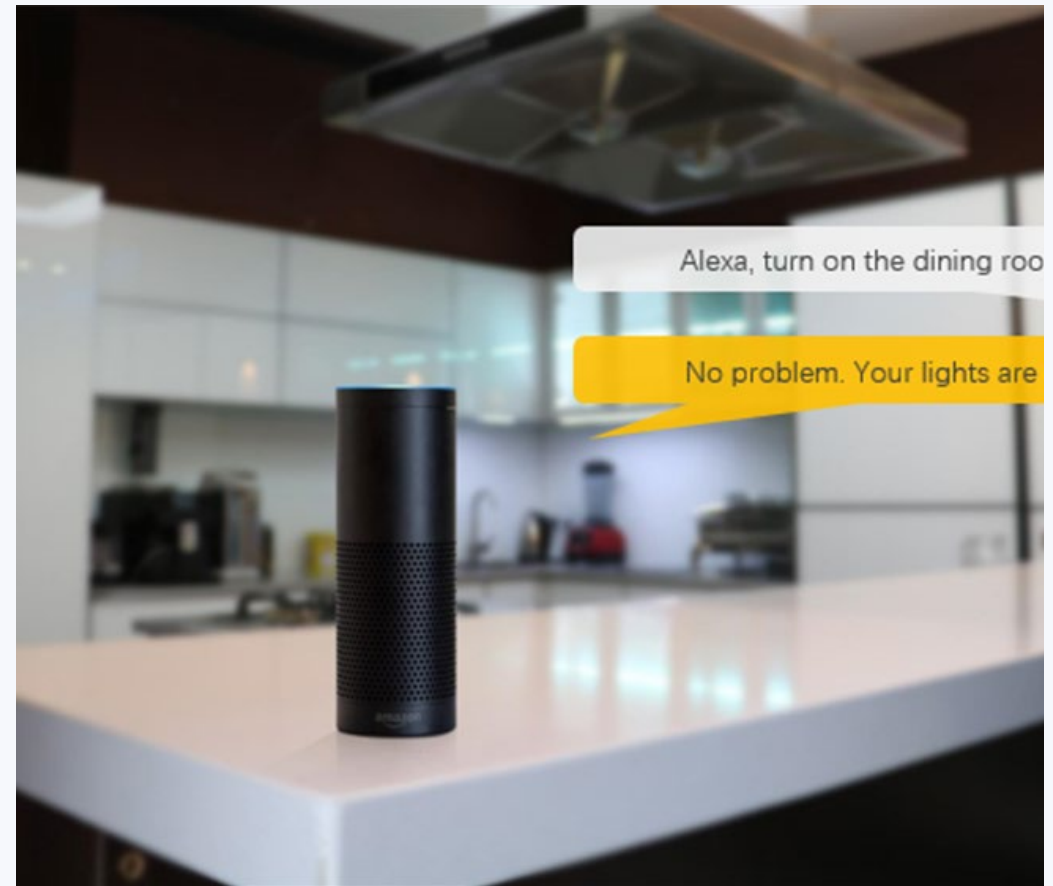
- Machine learning finds patterns in user behavior and data
- This can help assistants choose more relevant actions or answers
- But context must be handled carefully because it can raise privacy concerns

# Assistants can also automate routines

Voice control is useful beyond the phone itself

- Turn lights on or off
- Start a morning or bedtime routine
- Play news or music when an alarm ends
- Control connected home devices

This shows how AI assistants can connect digital commands to real-world actions.



# Privacy and safety matter

AI assistants are useful because they often access personal context



## Data involved

Voice recordings, contacts, reminders, location, and search or app history.



## Why it is sensitive

Personal context makes answers better, but it also creates privacy risk if mishandled.



## User controls

Permissions, settings, opt-in features, and activity review help users stay in control.

**A balanced classroom message: AI can be helpful and still require responsible use.**

# Limitations and challenges

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## Recognition errors

Background noise, unclear speech, or accents may reduce accuracy.



## Misunderstood meaning

The assistant might hear the words correctly but still choose the wrong action.



## Overreliance

Users may depend too much on automation instead of checking results themselves.

**Important lesson: AI is powerful, but it can still make mistakes.**



# Student-friendly examples

Easy scenarios to discuss in class

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## At school

A student says: “Set a reminder for my science test.”  
AI used: speech recognition + task creation.

## On the way home

A student asks: “How long will it take to get home?”  
AI used: maps, traffic prediction, and voice interaction.

## After taking a photo

A student opens the camera and gets automatic enhancement.  
AI used: computer vision and image processing.



# Questions?

Thank you