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AI Lunch & Learn

Your Journey from AI Curious to AI Confident

Record this session

Welcome to Lesson 1.1: Introduction to AI & Machine Learning

Today we'll cover:

- Define artificial intelligence in practical business terms
- Distinguish between AI and traditional software
- Identify at least five real-world AI applications
- Successfully interact with an AI chatbot

9th October, 2025

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How We Learn: The 30-Minute Formula

Every session follows the same structure

Instruction

Core concepts explained clearly

10 minutes

Demonstration

Watch it work in real-time

10 minutes

Practice

Try it yourself with guidance

10 minutes

You're already using AI daily

Email

Spam filters, smart categorization, and auto-complete suggestions

Common Examples:

- Gmail spam detection
- Outlook smart sorting
- Auto-reply suggestions

Navigation

Route optimization, traffic prediction, and voice directions

Common Examples:

- Google Maps traffic predictions
- Waze route suggestions
- Voice navigation

Social Media

Content recommendations, face recognition, and automated translations

Common Examples:

- Instagram feed algorithm
- Facebook photo tagging
- TikTok "For You" page

Smartphone

Face/fingerprint unlock, voice assistants, and photo enhancement

Common Examples:

- Face ID
- Google Assistant
- Portrait mode photo processing

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Traditional Software Deterministic & Rule-based	AI/Machine Learning Probabilistic & Adaptive
Follows exact rules	Learns patterns from data
If this, then that	Recognises patterns
Same input = Same output	Same input ≈ Similar output
Programmed knowledge	Learned knowledge
Cannot handle ambiguity	Thrives on ambiguity

Think: **Calculator** vs **Weather Forecaster**

A calculator follows precise rules to give exact answers, while a weather forecaster uses patterns to predict likely outcomes.

How AI Works - Simple View

Traditional Programming:

- Programmer writes rules → Computer follows rules

Machine Learning:

- Programmer provides data → Computer learns patterns → Computer makes predictions

Key Insight: AI recognises patterns like you learned to recognise cats - through examples, not rules

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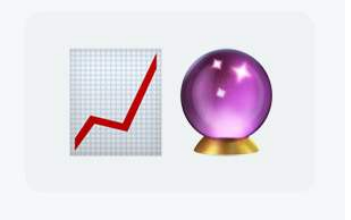
Types of AI We Use

Large Language Models (LLMs)

- ChatGPT, Copilot - understand and generate text

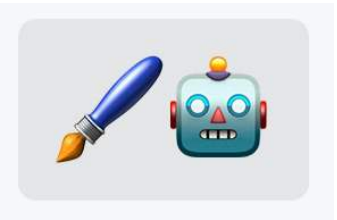


Computer Vision

- Can 'see' and understand images

Predictive AI

- Forecasts and recommendations

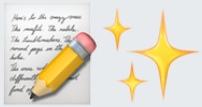


Generative AI

- Creates new content (text, images, audio, video, code)

Large Language Models (LLMs)

Understand and generate human-like text



Examples:

ChatGPT | Claude | Llama | Gemini

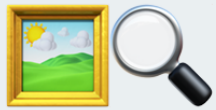
Key Capabilities:

- Answer questions in natural language
- Generate creative content
- Translate between languages
- Summarize long documents

Processes and generates human language

Computer Vision

Can 'see' and understand images



Examples:

Image recognition | Object detection | Facial analysis | Medical imaging

Key Capabilities:

- Identify objects in photos
- Detect faces and emotions
- Read text from images (OCR)
- Analyze medical scans

Interprets and understands visual information

Predictive AI

Forecasts and recommendations

Examples:

- Netflix recommendations
- Weather forecasting
- Stock market prediction
- Fraud detection

Key Capabilities:

- Suggest content you might like
- Predict future events based on patterns
- Identify unusual activity
- Optimize resource allocation

Identifies patterns to make informed predictions

Generative AI

Creates new content (text, images, code)

Examples:

- DALL-E
- Midjourney
- GitHub Copilot
- Music generation

Key Capabilities:

- Generate realistic images from text
- Create code based on descriptions
- Design logos and graphics
- Compose music and audio

Creates novel content across different media

Real-World AI Applications

Healthcare

- Cancer detection in X-rays
- Patient readmission prediction

Finance

- Fraud detection
- Credit scoring

Retail

- Inventory prediction
- Personalised recommendations

Manufacturing

- Quality control
- Predictive maintenance

Office Work

- Email drafting
- Meeting summaries
- Data analysis

Key Takeaways

Remember:

- AI recognises patterns - it doesn't 'think' like humans
- AI is a tool for augmentation, not replacement
- AI makes mistakes - always verify important outputs

Now let's see this in action...

Demo 1 - AI vs Traditional Search

Demo 2 - Pattern Recognition

Demo 3 - Creative Generation

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3 minutes

Your Turn - Exercise 1

Type exactly:

"Explain what a mortgage is like I'm 10 years old"

Then try: 2. "Explain what a mortgage is to someone buying their first home"

Discuss:

- What differences do you notice?
- How did it adjust to the audience?

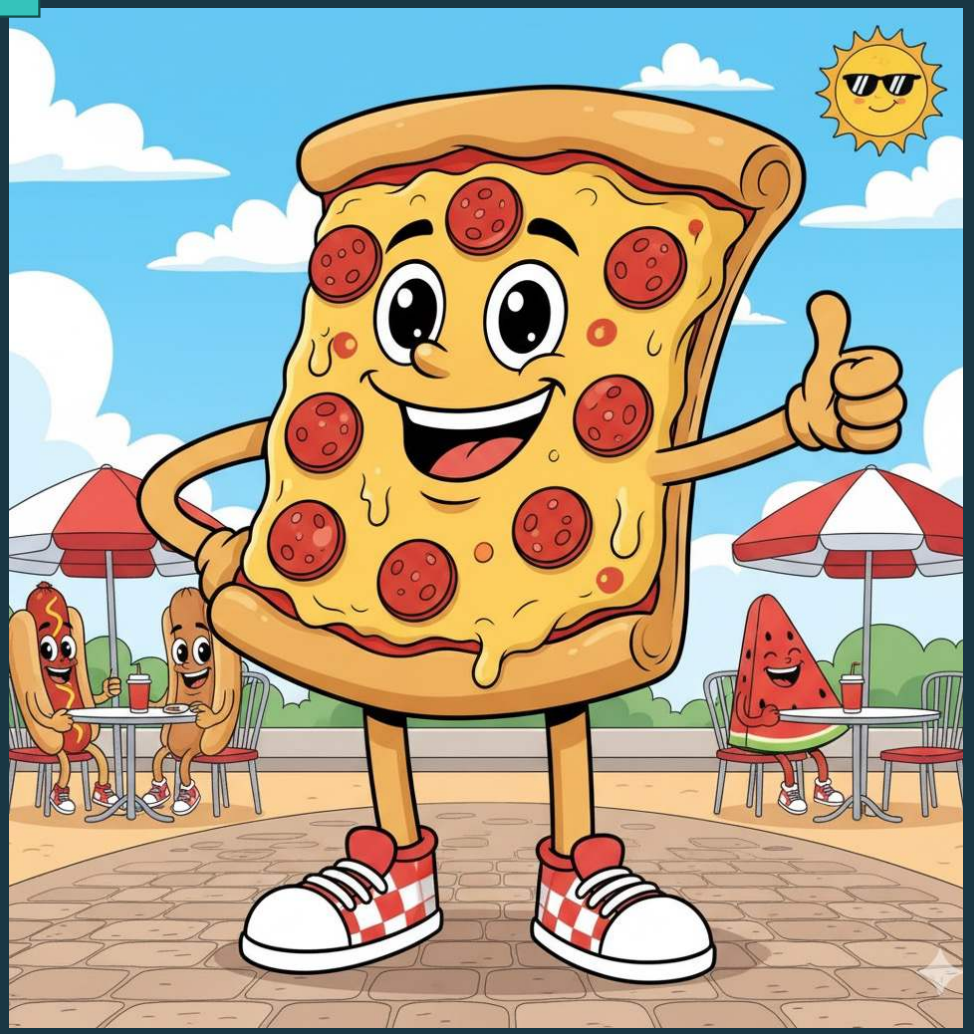
3 minutes

Your Turn - Exercise 2

Type this: "I have R600 to buy pizza for an office party. There will be 12 people. Some are vegetarian. Pizza costs R180 for large (8 slices) and R140 for medium (6 slices). What should I order?"

Follow up: "What if 3 people are gluten-free?"

Notice: Math, constraints, adaptability



3 minutes

Your Turn - Exercise 3

Use this template: "Write a 2-sentence story about [choose: a dog/cat/bird] who works as a [choose: accountant/ publisher/ sales manager] and discovers a very unusual thing”

Share: Would someone like to share their story?

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What We've Learned

You've just:

- Distinguished AI from traditional software
- Seen pattern recognition in action
- Experienced AI's creative capabilities
- Interacted with AI in several ways

AI can:

- Adjust communication style
- Solve multi-constraint problems
- Generate creative content

Homework Assignment

Before next session, try ONE:

- Ask AI to help write an email you actually need to send
- Have AI explain a complex topic from your field
- Ask AI to help plan something (meeting agenda, project steps)

Document:

- What worked well?
- What didn't work?
- What surprised you?

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