

A Beginner's Guide to Generative Al

Scan the QR code below to learn more about Generative AI:







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Introduction

The Digital Skills for Life (DSL) guide is a collection of booklets that is designed to help you learn essential digital skills for daily living. It offers step-by-step instructions and quick tips that empowers you to navigate the digital landscape confidently and safely.

It is designed for anyone who wants to pick up essential digital skills for daily living.

The DSL skills are grouped into 5 competency areas as shown in the diagram.

DSI

Learning outcomes: This quidebook focuses

on the 'Explore Information Online' competency where you will learn:

- The basics of Generative AI and its applications.
- How to use Generative AI tools.
- The risks associated with the use of Generative AI and its impact.
- How to identify false information associated with the use of Generative AI.

To help you acquire the learning outcomes, the guidebook uses different generative AI tools as examples to demonstrate the common features and steps.



The guidebook is based on common software icons and mobile device settings. Please note that certain features may differ across different mobile devices and models.

Understanding Artificial Intelligence (AI) and Generative AI (Gen AI)

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What is Artificial Intelligence (AI)?

Artificial Intelligence (AI) is **the science of teaching machines to mimic intelligent human behaviours.** Al systems are taught using computer programming to learn, reason, problem solve and create.









1. Learning

2. Reasoning

3. Problem solving

4. Creating



E.g. Teaching computers how to recognize speech



E.g. Teaching a computer Go

The Evolution of Artificial Intelligence (AI)



"Let's look at human learning. From birth, we rely on our senses to gather information from our surroundings and send these information to our brains to process them. Learning through mistakes and making new discoveries, we build our knowledge and over time, we become smarter in making decisions."





"Similarly, AI is **the science of teaching machines to mimic intelligent human behaviours.** AI systems are taught and trained using computer programming that learns and adapts. AI learns from lots of data using machine learning, deep learning and large language models (LLM) to identify patterns, relationships within the data and understand human language. As it learns, it gets smarter, recognising patterns and making predictions and decisions, like humans do."



The Evolution of Artificial Intelligence (AI)



"We're already experiencing AI in our daily lives through applications like autonomous vehicles, virtual assistants like Siri and Alexa, smart homes, and more."

Take a guess:

Where else have you likely encountered AI in your daily life?



Your email spam filter



Personalised product recommendations on websites



Adjusting the brightness on your phone camera





predict customers' shopping trends. buying patterns. They can then recommend / suggest products and The AI model is trained to analyse customers' behaviour, preterences and



:19W2nA

which are legitimate. emails. Over time, they will know which emails are labelled as spam, The AI model in the spam tilter will be trained with datasets of labelled

7

About Generative AI (Gen AI)

"So what exactly is Gen AI? Is it a subset of AI?"

"Yes. Gen AI is a leap forward from traditional AI. Traditional AI systems are primarily used to analyse data and make predictions, while Gen AI goes a step further by **generating new content through identifying patterns in existing data**.

KEYWORD WEB

Gen A

INFO

Although you can also use Gen AI to find information online, it is different from Search Engines. **Search engines like Google and Yahoo retrieve existing information from the web based on keywords or phrases**, directing you to websites where you can find the information. Gen AI can also find existing information on the web, **but its main use is to create entirely new content**."

What can Gen AI be used for?

Tex Generar text, su stories, a and po	xt te new uch as articles, oetry.	Ima Create u and imag imag from so	ge Unique ginative ges tratch.	Video Generate or edit videos based on scripts, prompts, or data.	Music Compose music by generating melodies, harmonies, and soundscapes.	Code Write and debug code in various programming languages.
		Examp	les of Gen	erative AI Tools and Th	neir Capabilities	
ChatGPT	Gemini	Microsoft Copilot	O Meta Al	Runway Al Synthesia	AIVA AMPER MUSIC	Github Copilot
Perplexity.ai	Jasper Al	Midjourney	DALL-E			

Some examples of how Gen AI tools such as ChatGPT and Gemini are applied in our daily lives



Gemini

ChatGPT

Gemini



ChatGPT

Gen AI in Action





Scan this QR Code to watch a 1-minute video on how Gen AI works! Thank you! I have a better understanding of what Gen AI is now. How do I make use of the tools? Where shall I start?

First, let me share with you the common features and steps that you will see on different Gen AI tools. For the purpose of this demonstration, I will use ChatGPT and Gemini, two of the most common "Text Generation" tools.

For the next part of the learning journey, do ensure you have the following pre-requisites.

Pre-requisites to learning the app

Learner must:

- Have a mobile device (either iOS or Android) connected to either cellular network or Wi-Fi with a working camera.
- Know how to install an app on the mobile device.
- Have a Google Account or an Email Address.

Exploring Common Features Across Gen Al Tools

Exploring Common Features Across Gen AI Tools



Greetings and introductions: Application may greet user at the start of the conversation.

- ii Response area: Application responds with a text message / image in this area where user can read the application's response.
- iii Text Input Field: User can enter prompts to the application.
 - Voice / Image Input: User can speak to the application and/or insert an image.

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Exploring Common Features Across Gen AI Tools



Chat History: User can view the previous chats.

Account Settings: User can adjust settings such as language.

Navigating Common Steps to Use Gen Al Tools

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Manage Settings	Page 18
Enter Effective Prompts with a Concept and Structure	Page 20
Share/Export Chat Responses	Page 24
Clear Chat History	Page 26

A Download the app and register for or sign into an account. If the Gemini app is not available for your device, download the Google app **G** and visit gemini.google.com.



Navigating Common Steps to Interact with Different Gen AI Tools Manage Settings В Tap on the "Menu" icon and go to "Settings" if you wish to customise your tools. Gemini 3 4 × Google Good evening Gemini settings JSarah 2 $(\mathbf{\bullet})$ lsarah@email.com Ideas to surprise Plan a game **Google Account** Your public links a friend on their night with Control how you share chats and Ð birthday friends responses Gemini Apps activity 5 Ľ× \vdots Languages Extensions ជា For speaking to Gemini Recent > Updates Ē Baking a Classic Vanilla Cake Screen context 3 E Allow Gemini to capture **Privacy Help Hub** 0 5 How to Make an Omelette information on your screen Switch to Google Assistant •: Gemini on lock screen Ĩ'n Use Gemini when your device is Settings ٩ ٦. Type, talk or share a locked photo <u>:</u> Feedback Google Assistant features in Gemini Help 0 •• Access features powered by Ŷ ⊳⁺ Google Assistant when you use Privacy Policy • Terms of service your voice with Gemini

B Manage Settings

Tap on the "Menu" and the "3-dots" icon to go to "Settings" if you wish to customise your tools.

ChatGPT				
Get Plus +	C :	Q Search	- ← Settings	
		S ChatGPT	② Lov Ng	
		88 Explore GPTs	Account	
			Email sarah@email.com	
		No recent chats	.com	
			& Personalization	
			🛱 Data Controls	
			Archived Chats	
			Арр	
How to use ChatGPT with these tips and tricks	Write a sh tailored to		Color Scheme System (Default)	
🖻 🔁 🖻 Message	•		I Haptic Feedback	
How to use ChatGPT with these tips and tricks	Write a sh tailored to	Sarah	€ English	

A prompt is an instruction you provide to a Gen AI tool to create or explore new content. It can be given in three forms: text, voice, or image. This guidebook will show you how to use all three methods to enter prompts effectively. Crafting a good prompt is key to getting high-quality responses, and we'll guide you through techniques to improve your prompts for the best results.

Enter your prompts in the "Text input field" and tap on the "Arrow" icon.



D

Use voice to enter prompts

Tap the **"Mic"** icon to speak to the tools and they will be converted into texts. Tap on the **"Arrow"** icon to send the prompts.



E Use images with your prompts

Tap either the **"Gallery"** or the **"Camera"** icon to upload images or take photos to send as a prompt. Use the same prompt concept or structure if it's a new prompt.



Prompt Concept & Structure

In addition to the 5 components we shared earlier, here are more tips to help you craft good prompts:

Use natural language

Write as if you are speaking to another person. Express thoughts in full sentences.

2

3

4

Be specific

Tell the Gen AI tool what you need it to do. Provide as much context as possible.

Be concise and clear

Start with clear, direct questions or statements on what you want the Gen AI tool to do.

Iterate and keep the conversation going Fine-tune your prompts if required and use follow-up prompts to get a better response.



F

Share/Export your Responses

Tap on **"Share"** icon and select **"Create public link"**. Then tap on the **"Share"** icon next to the link and select the app you wish to share to.



Share/Export your Responses

Tap on the "3-dots" icon and select "Share". Tap "Share Link" and select the app you wish to share to.



G

Clear Chat History

If you wish to clear the chat history, tap on the **"Menu"** icon and select the chat you wish to view. Tap on the **"3-dots"** icon and select **"Delete"**.



Chat with Gemini

After you have gone through how to navigate the common steps across Gen AI tools, here's how you can chat with Gemini from start to end with our step-by-step guide.

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Modify Response	Page 32



- B. Tap on the **"Mic"** icon and speak to the tool.
- C. Tap on the **"Camera"** icon to take a photo/insert an image.

Chat with Gemini - Edit Prompts

If you want to revise your prompt to Gemini, you can edit it and Gemini will regenerate the response.



prompt if you wish to amend.

Gemini

to amend.

Chat with Gemini - Show Drafts

After entering your prompt, Gemini will generate a few drafts. You can pick the best draft to continue your chat with Gemini.

Gen	nini
 Swimming Lessons for To Find a quaimed instructor: A patient and experienced swim instructor can help t confidenc Export to Docs Lead by e M Draft in Gmail comfortat help your Create public link Remember, patient and every small Select text Modify response Would you li C Other drafts Report legal issue P Report legal issue 	2 ← Drafts Draft 1 Best Age to Start Swimming Lessons and Overcoming Fear Great question! It's wonderful that you're considering swimming lessons for your 3-year-old. When to Start Swimming Lessons While children can start getting comfortable with
Type, talk or share 9	Currently in use

Tap on the **"3-dots"** icon and tap on **"Other drafts"**.

Chat with Gemini - Google It

Gemini includes a button to make it easy for you to double-check responses or explore sources on the web. When you tap "Google It", Gemini provides suggestions for Google Search queries. You can tap on the link to visit the website to read more.



Scroll down and you will see the **"Google"** icon, tap on it.



Suggestions for Google Search queries will be highlighted. Tap on the **"Arrow"**.

Best Age to Start Swimming Lessons and Overcoming Fear Great question! It's wonderful that you're considering swimming lessons for your 3-year-old. When to Start Swimming Lessons While children can start getting comfortable with water as early as infancy, most experts agree that Google Search found similar content. like this: www.swim-teach.com Around 4-5 years of age, children have developed enough physical strength to coordinate their move... Was this check helpful?

Tap on the query and you will be brought to the website.

Chat with Gemini - Modify Response

You have the option to modify responses in part or in full, to suit your desired outcomes. You can use this feature to shorten, lengthen, simplify, making the tone more casual or professional by tapping on the "3-dots" icon. Tap on "Modify response" to see your options.



Scroll down and tap on the icon. Select **"Modify response"**.

Chat with Gemini - Export Response and Clear Chat History



Select "Create public link" if you

wish to share as a sharable link. You

can also either select "Export to

Docs" or have the response appear as a "**Draft in Gmail**" Tap on the **"Menu"** icon and select the chat you wish to clear. Tap on the **"3-dots"** icon and select **"Delete"**.

:

Hands On Activity!

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Quiz Time!

Which is a better prompt, Prompt A or B?

You want to make healthy meals weekly for your 5-year-old girl but are out of ideas.

Prompt A

I'm a mom looking to create a healthy weekly meal plan for my picky 5-year-old daughter. Generate a plan with breakfast, lunch, dinner, and snack options for each day, presented in a bulleted list. Give me ideas on what to cook for my daughter.

Prompt B

Quiz Time!

Quiz Time! Which is a better prompt, Prompt A or B?

You want to make healthy meals weekly for your 5-year-old girl but are out of ideas.





Try it Yourself!

Pick one of the following and try to improve the prompts using the following structure:

Persona

Context

Audience

Task

Format

I want to learn painting. Give me a guide on how to get started. Show me an image of the sample painting.

2 Help me come up with interesting ideas to organise a birthday party for my friend. Give me images of some decorative ideas for the party.

Try it Yourself!

Persona

1

Context

Audience

Format

2

Suggested prompt:

Act as my painting tutor. I want to learn painting. I have no prior painting experience and want to focus on techniques and materials that are easy to find. Provide a step-by-step guide for a simple painting project, including a list of materials, instructions, and tips for beginners. Show me an image of the sample painting.

Here's a simple landscape painting as an example:



simple landscape painting with a tree on a hill and a blu... **Tips for Beginners:**

• Don't be afraid to make mistakes.

Suggested prompt:

Task

Act as an event planner. I am organising a birthday party for my best friend. Her favourite things to do are scuba diving, watching comedy shows and spending time with her dog. Help me come up with some interesting themes and activities that we can design this birthday party around. Present the ideas in bullet form. Give me images of some decorative ideas for the party.



Laugh Out Loud Comedy Night birthday party decor...

- 3. Paw-some Pup Party
- Decorations:
 - Dog-themed decorations like paw

Understanding and Managing Risks of Gen Al

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Be Safe: Recognising the Risks of Gen Al

Data Privacy Concerns

No sensitive information, including personal or company data, should be used in your prompts. Sharing such details could lead to unintended use in ways you might not expect.

2 Hallucination and Unintentional Harms

An AI hallucination is when a generative AI model generates inaccurate information but presents it as if it were correct. This can cause problems for users in these ways:

- Misinformation: Users might believe and act on false information.
- User Harm: Risk of harm from inaccurate advice (e.g. believing in false medical and financial advice).





3 Copyright Issues

- It is hard to know who owns content made by AI because the technology is improving fast.
- Avoid using AI outputs that might copy existing works.
- When in doubt, ask for permission from the original creator and cite your sources.

4 Spreading Misinformation

- Gen Al can create untrue information or misleading content.
- It can produce news articles, videos, or pictures that look real, but are not.

What are Deepfakes?

- Deepfakes are fake images, videos, and sounds that look very real.
- It can also be used to create believable scams, taking advantage of people's trust and personal details.



Be Safe: Recognising the Risks of Gen Al

5 common types of AI-generated misinformation:

1 Text

Creating fake text imitating someone's writing style, used for spreading misinformation.

X Misinformation

Who was the sole survivor of Titanic?

The sole survivor of the Titanic was a young cabin boy named William Archer, who miraculously floated to safety on a large wooden door after the ship sank. Despite the freezing cold waters, he was discovered three days later by a passing ship, clinging to life but alive. His incredible story became legendary, and he lived to be 103, sharing his tale with future generations. 2

Video

Making realistic videos by swapping faces, often used for entertainment or spreading misinformation.

Scan the QR code below to see an example:



3

Images

Editing pictures to change appearances, often widely used on social media.



4

Creating voice recordings that mimic someone's voice, often used for

deception.

Audio

Scan the QR code below to see an example:





Real-time / Live

Generating instant audio and video copies, often used for immersive experience or controlling others.

Scan the QR code below to see an example:







How to Spot Al-generated Misinformation



Look at its origins. Are they trustworthy?

Make sure that the source of information is credible and reliable (e.g. established newspapers or reputable news websites).

- Look for telltale signs Example: AI chatbots may include lines like "As an AI language model..."
- **Double check all references** cited in the article to verify that they really exist. Chatbots are known to make up information that may seem real superficially.
- Verify that credited authors are real people.



Know what you're reading. Search for clarity.

Look for facts rather than opinions. Question personal biases.

- Not all AI generated content are "fake news". Seek to understand the wider context and intentions behind them, e.g. is it to inform, persuade or mislead?
- Be aware that even experts like photography judges have failed to detect AI generated images as technology advances.
- Al generated misinformation is an evolving challenge, and it's essential to remain vigilant, informed, and adaptable in the face of new developments.

How to Spot Al-generated Misinformation



Dig deeper. Go beyond the initial source.

Investigate thoroughly before making a conclusion. Check and compare with multiple sources.

• Dig deeper

Do an online search with the title of the suspicious content to see if it was mentioned in the news or other credible sites. Find at least two or more credible news sources to confirm.

- Learn to **use AI-enabled tools** to help identify AI-generated text and images. For examples of such tools, head to https://go.gov.sg/nlb-sure-genai and click **"AI Fact-checking tools"**.
- **Conventional fact-checking skills are still important.** Where AI tools fail, a simple Google search may reveal the truth.



Find the balance. Exercise fair judgement.

Look from different angles. There are at least two sides to every story.

• Two sides to a story

Some posts may be biased and not reflect the actual incident. There may be another side to the story.

- Exercise critical thinking and employ a skeptical mindset.
- Look for inconsistencies or conflicting information.

How to Spot AI-generated Misinformation

Analyse Audio-Visual Elements to spot Deepfakes.

Audi	o-Visual Elements	Description
0	Facial features	 Blurring around edges of the face, facial features, or the side profile. Uneven resolution and unnatural shadows around facial features. Unnatural edges around features.
2	Expression & eye movement	 Unnatural or lack of blinking. Inconsistent light reflection in eyes. Unnatural facial expression.
3	Skin texture & skin tone	Unnatural or inconsistent skin colour tone.Differences in resolution and skin textures.
4	Background consistency	• Blurred, out of focus or distorted areas in the background.
5	Audio-video consistency	 Lips not synchronised with speech. Limited variance in tone inflection. Incongruent background noise.

How to Spot Al-generated Misinformation Example: Audio-Visual Elements to spot Deepfakes

Audio/visual examination on videos



TikTok user performing face swap of Jennie (K-Pop girl group BlackPink). Video taken from TikTok.



Image taken from vogue.sg for comparison.

Obvious areas:

- Lack of definition in eyebrows.
- Jawline that is different from source picture.
- Inconsistent and slight blurring around the edges of the face.
- Difference in the resolution of the face from different parts of the body.



Try to spot these audio-visual elements! Scan the QR code below to watch the video:



Have Fun with Gen Al!

Have Fun with Gen Al!

Test your ability to spot AI-generated images with NLB's online quizzes on Kahoot.

Scan the QR codes below to challenge yourself!







5 Essentials to Know about Gen Al

Gen Al is a Type of Al Technology

Gen AI is a subset of AI that focuses on creating new content by learning from existing data. While traditional AI is designed to make predictions and decisions based on data, Gen AI goes a step further by producing original content. Gen AI may interact with you like a human, but it is not. It is an AI technology.



2 Gen Al can Create a Wide Range of Content

- Gen AI can produce new content such as text, images, and audio based on the prompts you provide.
- For example, you can use Gen AI to draft an email, design a healthy meal plan, compose music, or create videos. The possibilities are vast, but the quality of the output depends on how well you guide the AI.



3 Gen Al has its Risks

Privacy

Be cautious about sharing personal information online, as Gen AI can misuse it if not securely handled.



Copyright

Avoid using AI to create or share content that infringes on copyrights. Credit original creators and use content responsibly.



Misinformation

Gen AI can generate highly convincing content, such as deepfakes, that spread misinformation.

Hallucination



Sometimes, Gen AI can hallucinate by producing convincing yet false content.

4 Stay Safe: Recognise AI-generated Misinformation

Use the National Library Board's S.U.R.E. framework to assess online content:

- **S** Check the SOURCE
- UNDERSTAND the Content
- RESEARCH the Authenticity
- Evaluate from Different Angles



S.U.R.E.

5 Stay Safe: Spot Deepfakes

Analyse audio-visual elements with these tips adapted from the Cyber Security Agency of Singapore:

- Check for unnatural facial features, expressions, and eye movements.
- Look for inconsistent skin texture and tone anomalies.
- Ensure background consistency and audio-video sync.



As Gen AI evolves, it will increasingly influence our daily lives, providing new conveniences alongside potential risks. Stay informed about these developments and use Gen AI responsibly to maximise its benefits while minimising risks.



For more information and to find your nearest SG Digital community hubs:

IMDA Contact Centre

Hotline: +65 6377 3800 Email: info@imda.gov.sg Website: digitalforlife.gov.sg

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