The Generation of GenAI: Creating Efficiencies for Business.

Human Led
Tech Powered

PwC Legal Business Solutions
December 2023

pwc

Who is with you today

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Agenda

Introduction	**Rebecca Hastings - Quainoo**
Use Cases	**Ritwik Raj and Haris Haider**
Legal Prompting	John Driver
Risks	**Megha Gupta**
Demo	**Megha Gupta**
Breakout Session	All
Q&A	All

Introduction

Rebecca Hastings - Quainoo

What is Generative AI?

Artificial Intelligence

Artificial Intelligence
AI is the theory and development of systems embedded in an environment, that sense, make decisions, and act to achieve a specific purpose.

Machine Learning

Machine Learning
A subfield of AI focused on building systems that automatically improve their performance over time and through experience.

Deep Learning

Deep Learning
A type of ML technique based on artificial neural networks in which multiple layers of processing are used to extract progressively higher-level features from data.

Example - Facial Recognition at Airports, Natural Language Processing Chatbots

Generative AI

Generative AI
Algorithms (such as ChatGPT) that use a large amount of data and large pre-trained models to generate new content:
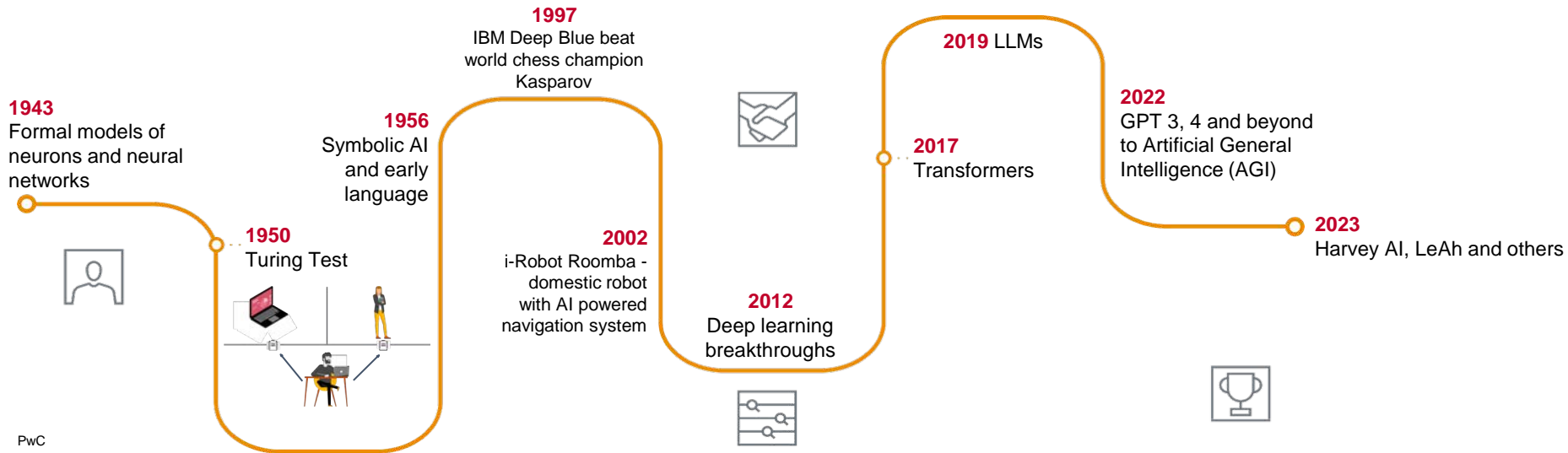- Written: text, code
- Visual: imagines, videos
- Auditory: audio

Examples:
LeAh
Harvey
Gracenote
ChatGPT

Gen AI - A Step Back in Time

AI evolution has been marked by both ever shortening time frames between major innovations, as well as an expansion into the types of work previously reserved to humans.

Key trends:

- Previously uniquely human activities now within AI's capabilities.
- Cost of AI has dropped dramatically.
- AI is making progress into areas that were previously entirely the area of human expertise.
- AI's impact on industry is already huge, but difficult to predict the level and nature of upcoming disruptions.

1943
Formal models of neurons and neural networks

1950
Turing Test

1956
Symbolic AI and early language

1997
IBM Deep Blue beat world chess champion Kasparov

2002
i-Robot Roomba - domestic robot with AI powered navigation system

2012
Deep learning breakthroughs

2017
Transformers

2019 LLMs

2022
GPT 3, 4 and beyond to Artificial General Intelligence (AGI)

2023
Harvey AI, LeAh and others

GenAI Today

Voice Assistants

Social Media

E-Commerce

Gaming

Healthcare

Law

Education

Fashion

Space

Use Cases

Ritwik Raj and Haris Haider

Task Driven Use Case

DISCOVERY
- Document review and Analysis
- E-Discovery and Litigation Support

DRAFTING
- Summarization
- Email, Documents, Memos

RED LINING
- Document Comparison
- Negotiation

DATA EXTRACTION
- Data recognition and Extraction
- Data transformation & visualization

LEGAL USE CASES OF GEN AI

LEGAL RESEARCH
- Information retrieval and Analysis
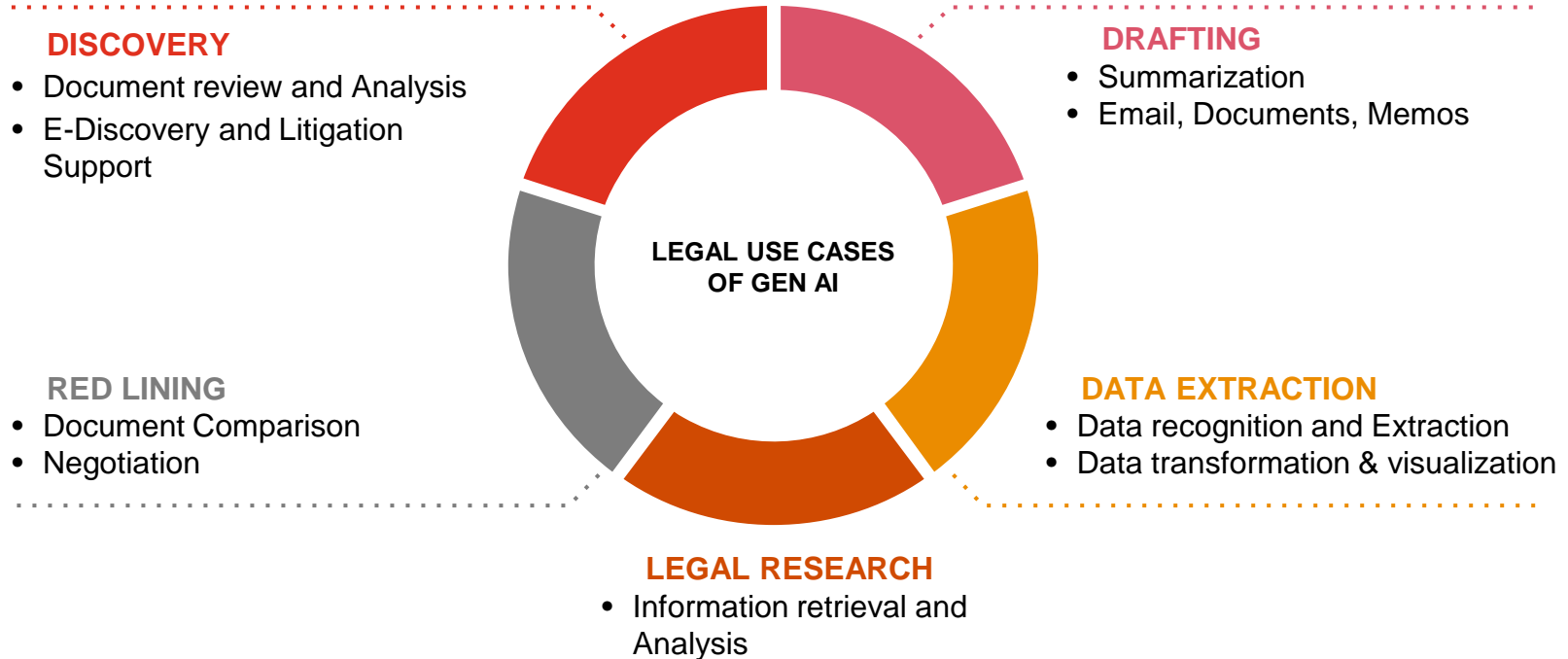
What tasks could I use it for now?

Teach - learn the basics about a specific topic or concept

- "Pretend I have no legal background and explain the concept of Legal Reasoning"
- "Give examples of how this legal issue would apply to a business in the consumer goods sector"
- "Give examples of how this clause might be considered ambiguous"

Transform - reframe and repurpose

- "Extract and summarise the key obligations from this piece of legislation"
- "Convert this internal briefing into a 5 minute presentation and speaker notes"
- "Write an excel formula to remove blank spaces and join this text together"

Summarise - condense key information into a concise format

- "Create a table of action points from this webinar transcript"
- "Write a single sentence summary of this legal paper"
- "Extract the information in this article relating to IP law and convert it into flashcards"

Legal Prompting

John Driver

Legal Prompting - Mastering Prompt Engineering in Generative AI

- What is a 'prompt'?

- Why are prompts crucial?

- Prompt influence on Model

  Output

Effective Prompt Techniques

1

Specific vs. Open-Ended Prompts

- Specific prompts provide clear and detailed instructions to the model, leaving little room for interpretation.
- Open-ended prompts give the model more creative freedom, which can lead to diverse and imaginative responses.

2

The Importance of Context

- Providing context within a prompt helps the model understand the task and generate more relevant content.
- Contextual prompts can be in the form of preceding sentences or additional information that sets the stage for the model.
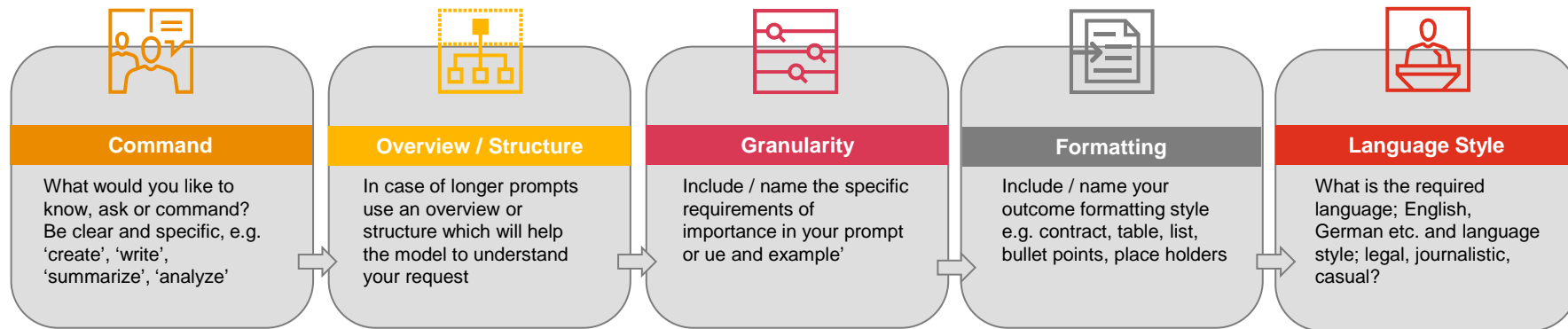
3

Experimentation and Adaptation

- Experimenting with different prompts is essential to find the most effective approach.
- Be prepared to adapt prompts based on the model's responses and the desired outcome.

4

Guide the models thinking

- If you want the model to brainstorm ideas or consider different perspectives then guide it by explicitly stating what aspects to focus on or explore. E.g. list pros and cons, alternative solutions or different view points.

Command	Overview / Structure	Granularity	Formatting	Language Style
What would you like to know, ask or command? Be clear and specific, e.g. 'create', 'write', 'summarize', 'analyze'	In case of longer prompts use an overview or structure which will help the model to understand your request	Include / name the specific requirements of importance in your prompt or ue and example'	Include / name your outcome formatting style e.g. contract, table, list, bullet points, place holders	What is the required language; English, German etc. and language style; legal, journalistic, casual?

Example: ① | Draft a contract | which ② | covers two phases, the development and supply phase of a specific product. | ③ | Include a definition section, a scope section, a core team which exists of both project leads and technical leads form the customer side and my company, a steering committee section and a training section. | ④ | Include placeholders, designated with brackets, for information I need to fill in before finalizing the contract. | ⑤ | Write it in a legal and mutual language. |

Prioritize your Command

1. [Command]
2. [Context]
3. [Example]
4. [Persona]
5. [Output - format and style]

More important

↓

Optional

Do
- ➢ Describe your result and how you want it to look like,
- ➢ Use the correct, commonly use buzzwords in your sector or field,
- ➢ Guide the models' thinking

Don't
- ➢ Overcomplicate your sentences,
- ➢ Underestimate the importance of correct grammar,
- ➢ Think that the model can read your mind

Prompting Takeaways

- **Linguistic Precision**
  - Mastery of language and grammar to craft clear and unambiguous prompts.
  - Understanding nuances in word choice and phrasing.
- **Contextual Awareness**
  - Ability to provide relevant context within prompts.
  - Ensuring the model understands the task, setting, and desired tone.
- **Creative Thinking**
  - Generating diverse, open-ended prompts that stimulate creative model responses.
  - Thinking outside the box to explore imaginative prompt options.
- **Data Analysis**
  - Proficiency in analyzing model outputs and prompt effectiveness.
  - Data-driven insights for refining prompts based on feedback.

Best Practices

- **Iterative Experimentation**
  - Willingness to try various prompt styles and adapt based on results.
  - Continuously refining prompts for improved model output.
- **Bias Mitigation**
  - Awareness of potential bias in prompts and language.
  - Strategies for crafting fair and unbiased prompts.
- **Ethical Considerations**
  - Understanding the impact of AI-generated content on users and society.
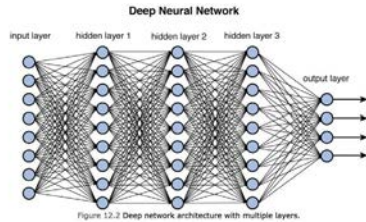 - Promoting ethical prompt engineering and responsible AI use.
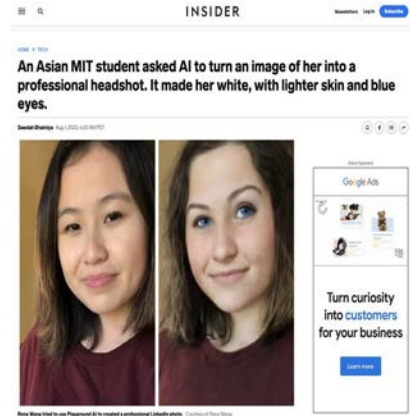
Risks

Megha Gupta

Built-in risks

Black Box

Deep Neural Network

input layer   hidden layer 1   hidden layer 2   hidden layer 3   output layer

Figure 12.2 Deep network architecture with multiple layers.

Bias/Data Bias

INSIDER

An Asian MIT student asked AI to turn an image of her into a professional headshot. It made her white, with lighter skin and blue eyes.

Turn curiosity into customers for your business

Confidentiality

Technology

ChatGPT Creator OpenAI Sued for Theft of Private Data in 'AI Arms Race'

- OpenAI artificial intelligence model ignores risks, suit says
- Its massive web scraping breaks the law, plaintiffs allege

Gift this article

OpenAI CEO Sam Altman testifies before Congress in Washington on May 16. *Photographer: Eric Lee/Bloomberg*

By Teresa Xie and Isaiah Poritz
June 28, 2023 at 7:15 PM EDT

Hallucinations

When A.I. Chatbots Hallucinate

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By Karen Weise and Cade Metz
Karen Weise reported this story from Seattle and Cade Metz reported from San Francisco.

Published May 1, 2023   Updated May 9, 2023

When did The New York Times first report on "artificial intelligence"?

According to ChatGPT, it was July 10, 1956, in an article titled "Machines Will Be Capable of Learning, Solving Problems, Scientists Predict" about a seminal conference at Dartmouth College. The chatbot added:

CHATGPT

This conference is now considered to be the birthplace of artificial intelligence as a field of study, and the article mentions the term "artificial intelligence" several times in the context of the discussions and presentations that took place at the conference.

Human risks

Inappropriate Use

THE WALL STREET JOURNAL.

U.S. | THE NUMBERS

Why ChatGPT Is Getting Dumber at Basic Math

AI chatbots have stoked fears that they could spin out of control, but they also suffer from a type of deterioration called 'drift'
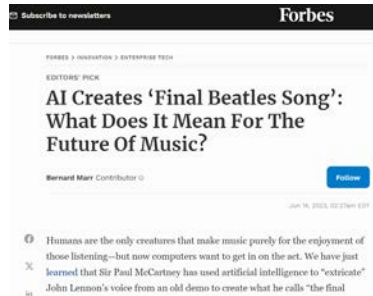
By Josh Zumbrun Follow
Aug. 4, 2023 5:30 am ET

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Unethical Use

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EDITORS' PICK

AI Creates 'Final Beatles Song': What Does It Mean For The Future Of Music?

Bernard Marr Contributor Follow

Jun 14, 2023, 02:37am EDT

Humans are the only creatures that make music purely for the enjoyment of those listening—but now computers want to get in on the act. We have just learned that Sir Paul McCartney has used artificial intelligence to "extricate" John Lennon's voice from an old demo to create what he calls "the final

Unsupervised use

REUTERS World ∨ Business ∨ Markets ∨ Sustainability ∨ Legal ∨ More ∨

New York lawyers sanctioned for using fake ChatGPT cases in legal brief

By Sara Merken
June 26, 2023 10:28 AM GMT+2 · Updated 4 months ago

ChatGPT is

Unlawful use

VICE

MOTHERBOARD
TECH BY VICE

How I Broke Into a Bank Account With an AI-Generated Voice

Banks in the U.S. and Europe tout voice ID as a secure way to log into your account. I proved it's possible to trick such systems with free or cheap AI-generated voices.

By Joseph Cox

February 23, 2023, 11:44am

PwC

Demo

Megha Gupta

Breakout Session

Breakout Session

"Are you currently using legal tech? How are you using it? What difficulties or challenges have you found?"

Group 1	Group 2	Group 3	Group 4	Group 5
Rebecca Hastings - Quainoo	Ritwik Raj	John Driver	Megha Gupta	Haris Haider

5-7 minutes

Share thoughts

Feedback

Q&A

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Thank you

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