

Welcome to Generative AI and Its Use

Exploring the Impact of Generative AI
in Various Fields



Plan

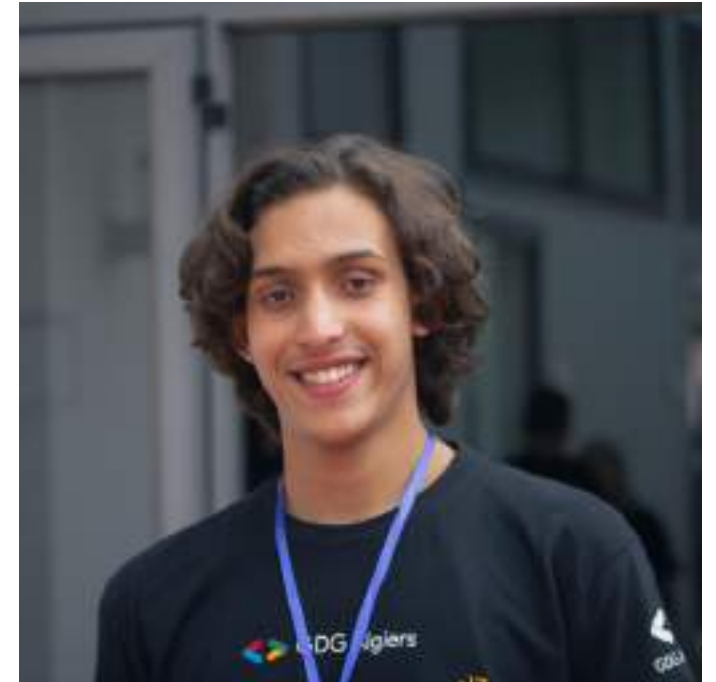
- Introduction
- Foundations of Generative AI
- Real-World Applications
- Practical Skills & Implementation
- Future Perspectives & Ethics
- Conclusion



Introduction

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Foundations of Generative AI

What is Generative AI ?

- It is a **revolutionary** technology, similar to the invention of photography, that allows for the creation of content without needing artistic talent.
- AI that creates new content, such as text, images, music, and more.

Generative AI



Text Generation

Image Generation

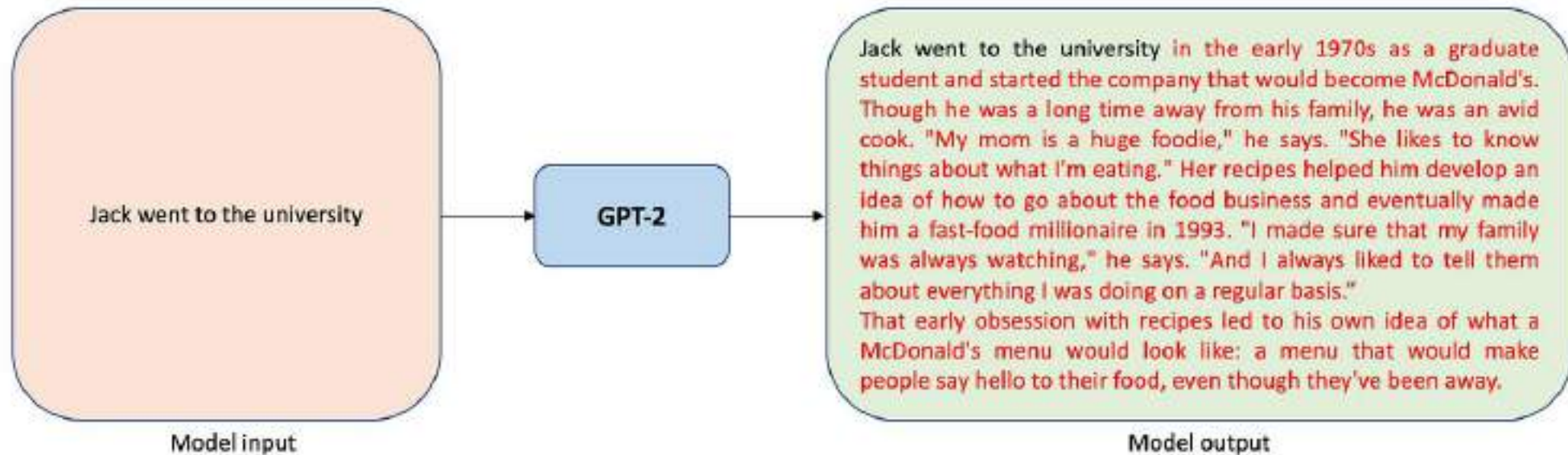
Code Generation



Foundations of Generative AI

- What is Generative AI ?

Text Generation



Foundations of Generative AI

- What is Generative AI ?

Image Generation



Foundations of Generative AI

- What is Generative AI ?

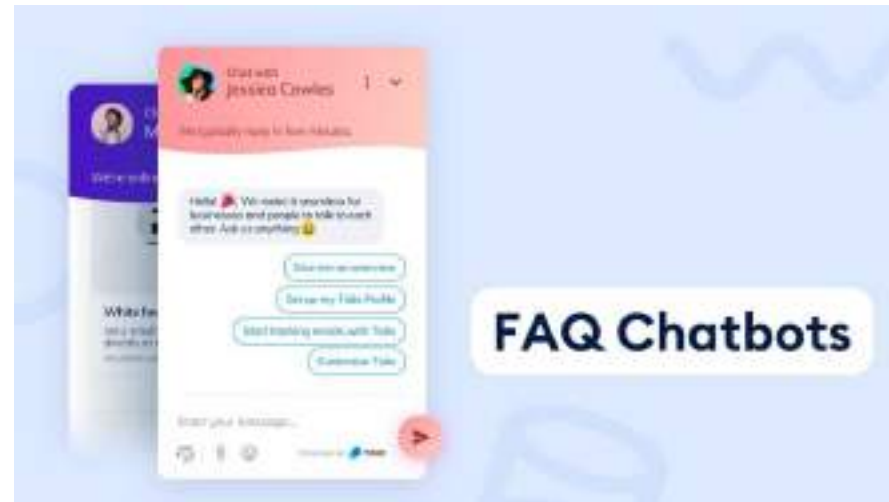
Code Generation

```
JS test.js 1 ●  
JS test.js > calculateDaysBetweenDates  
1 function calculateDaysBetweenDates(begin, end) {  
    var beginDate = new Date(begin);  
    var endDate = new Date(end);  
    var days = Math.round((endDate - beginDate) / (1000 * 60 * 60 * 24));  
    return days;  
}  
2
```

Foundations of Generative AI

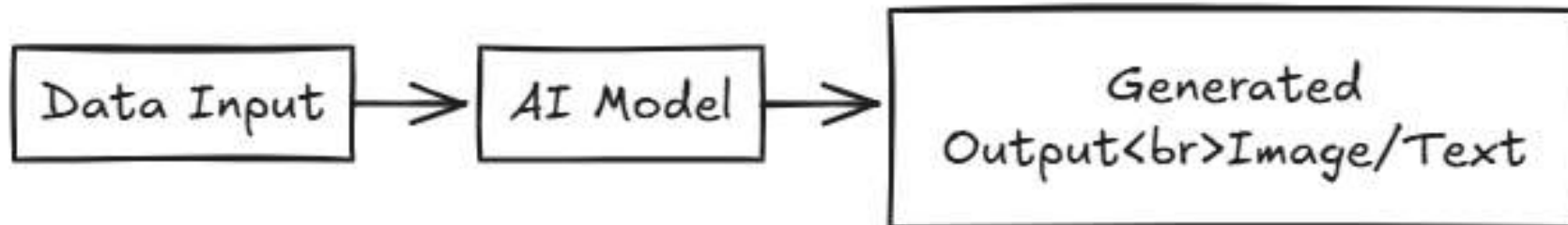
- Importance Of Generative AI ?

- It is a **revolutionary** technology, similar to the invention of photography, that allows for the creation of content without needing artistic talent.
- It reduces the burden of repetitive tasks and enhances creativity by generating new ideas and solutions



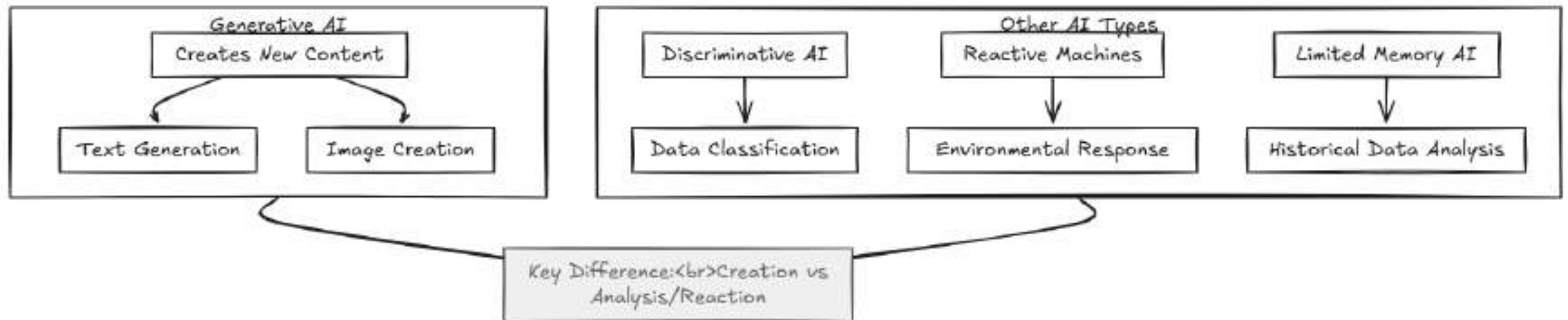
Foundations of Generative AI

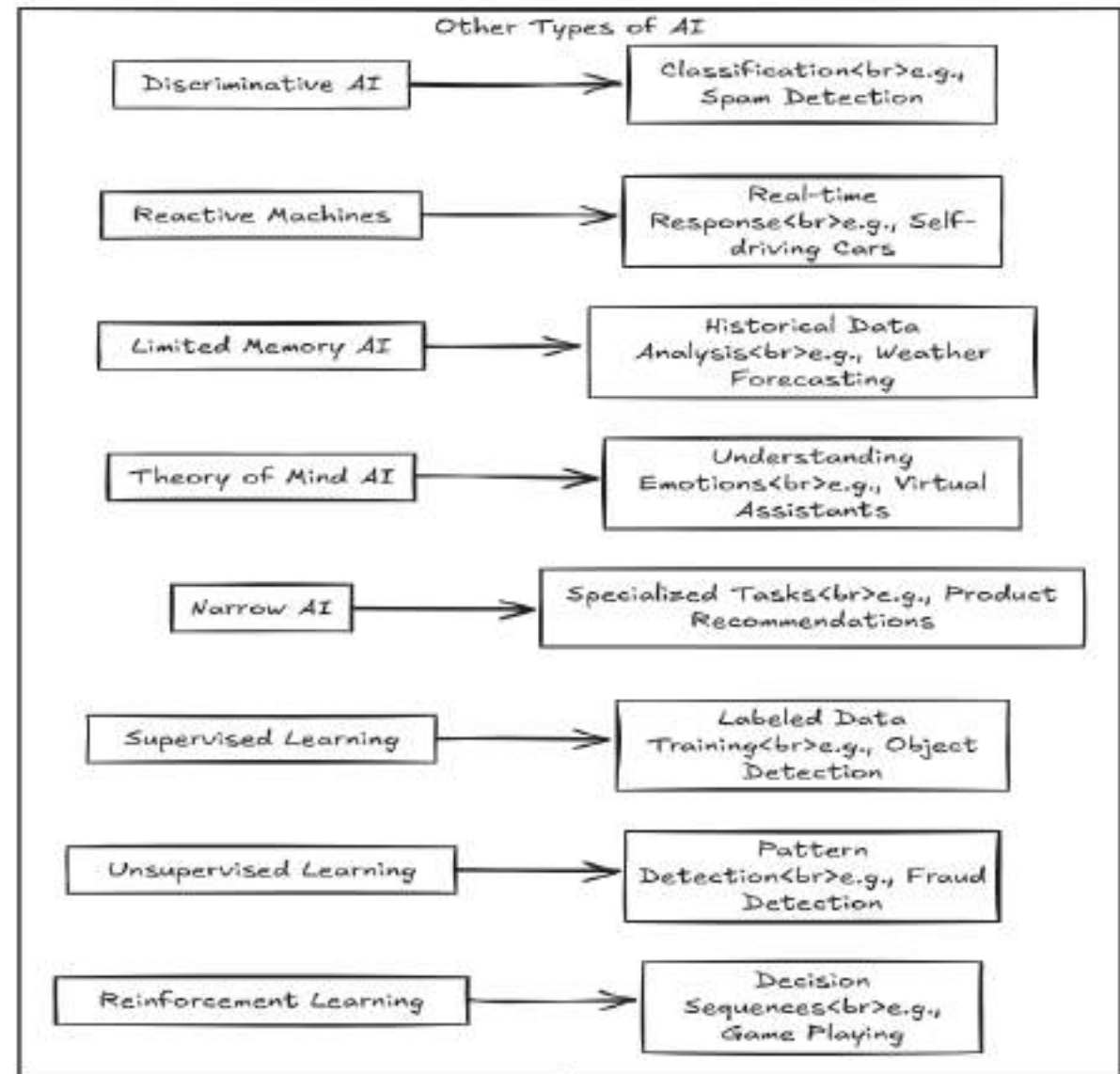
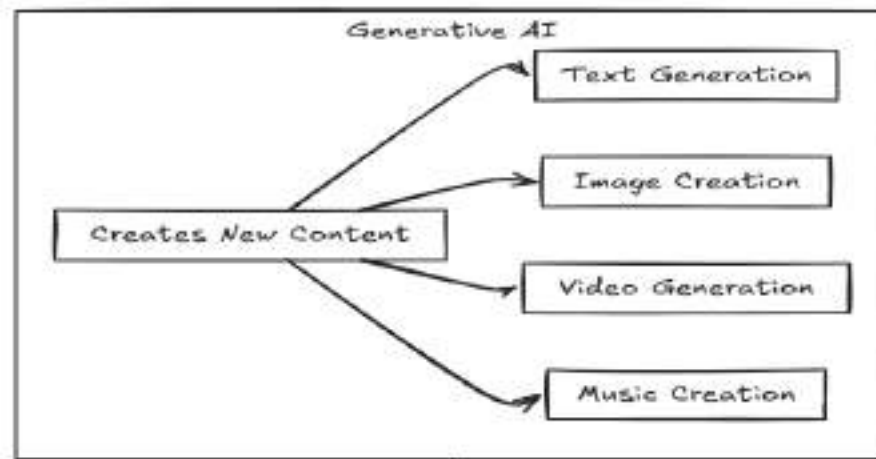
- How Gen Ai Works
- Generative AI learns from large datasets to create new content.
- Different models (e.g., OpenAI, Google, DeepSeek , Qwen) are used for various tasks.



Foundations of Generative AI

- Generative AI vs. Other Types of AI





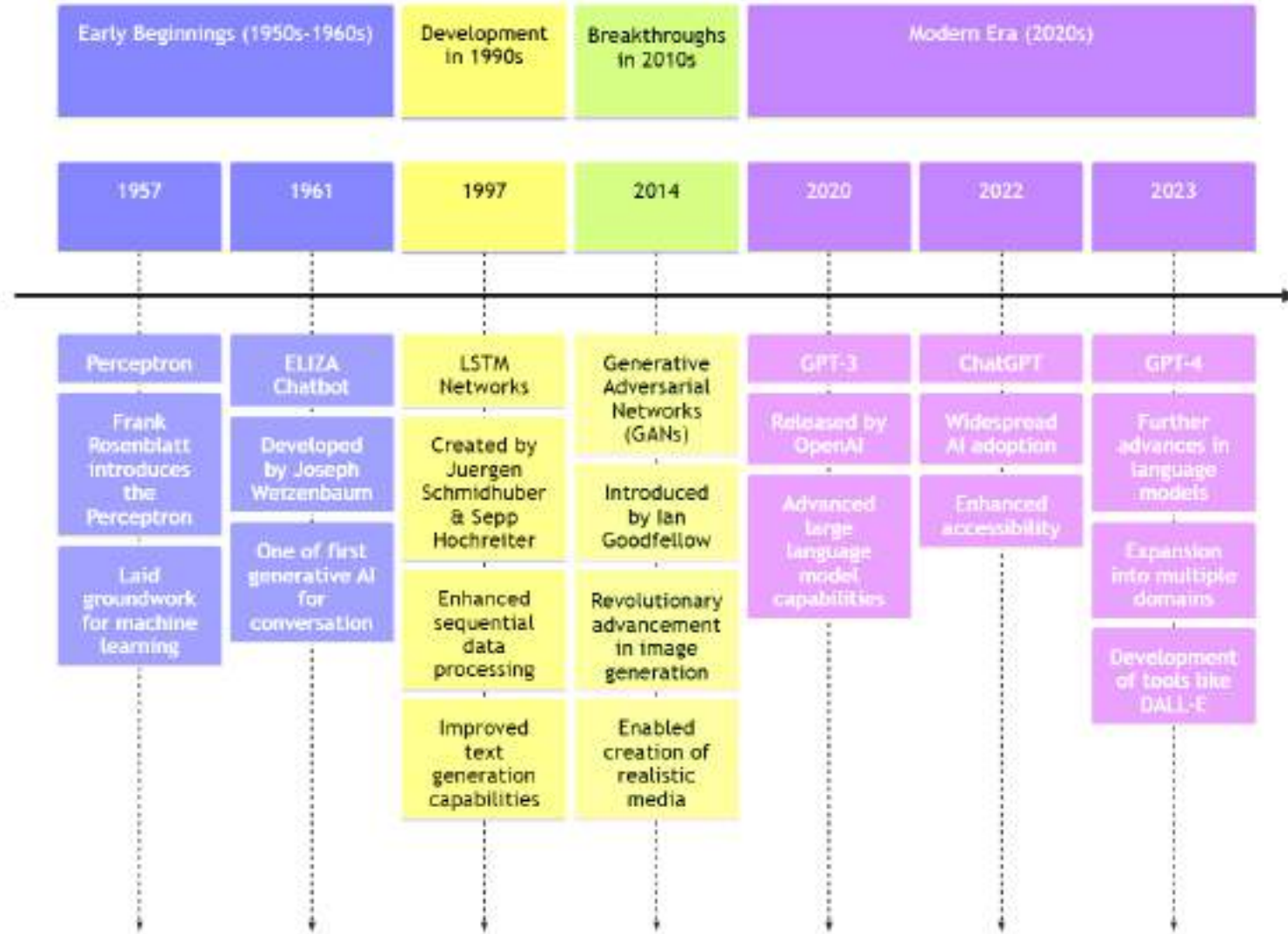
Key Difference: Primary Content Creation vs. Secondary Generation Effects

Foundations of Generative AI

- History of Generative AI



History of Generative AI



Real-World Applications

- Medical Applications
 - **Medical Imaging:** AI-enhanced MRI reconstruction (tools like CuebriC)
 - **Drug Discovery:** Generative models simulating molecular interactions (e.g., Insilico Medicine)
 - **Patient Care:** AI-generated treatment plans from An Electronic Health Record data



Real-World Applications

- Cross Industry Applications
 - **Creative:** AI-generated marketing campaigns (Heinz "A.I. Ketchup" ads)
 - **Manufacturing:** 3D-printed prototypes using GANs (Audi wheel designs)
 - **Legal:** Contract drafting with NLP models



Practical Skills & Implementation

- Prompt Engineering

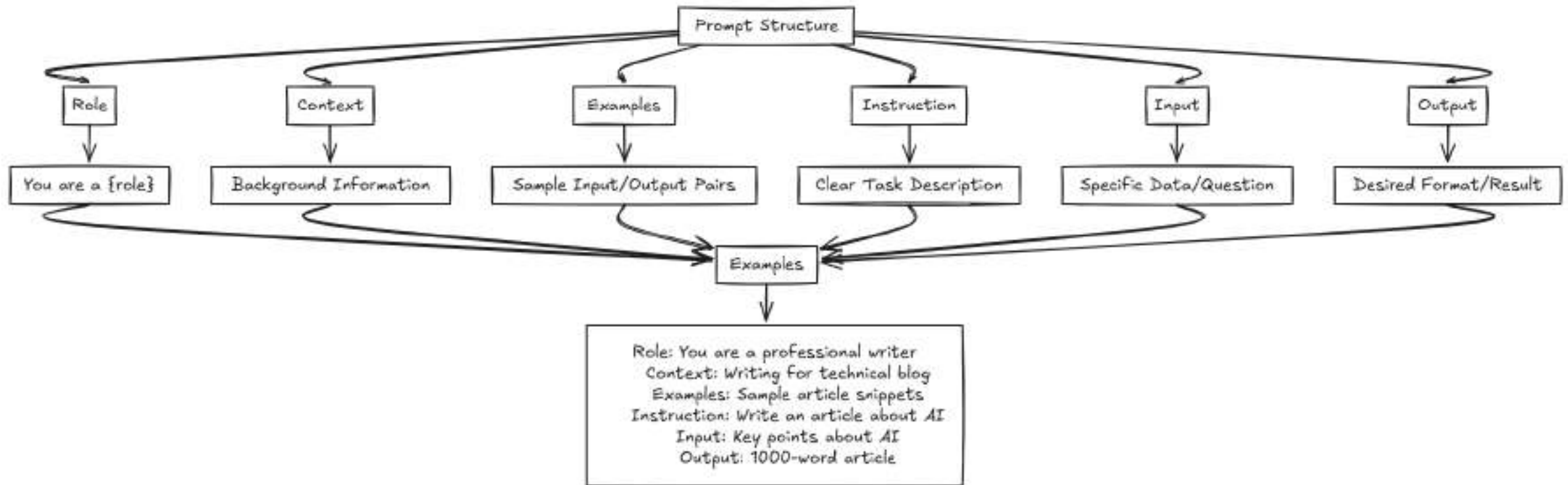
Why Prompt Engineering ?

- To exploit LLMs in the best way possible in today's world where AI is everywhere



Practical Skills & Implementation

- Defining The Structure:



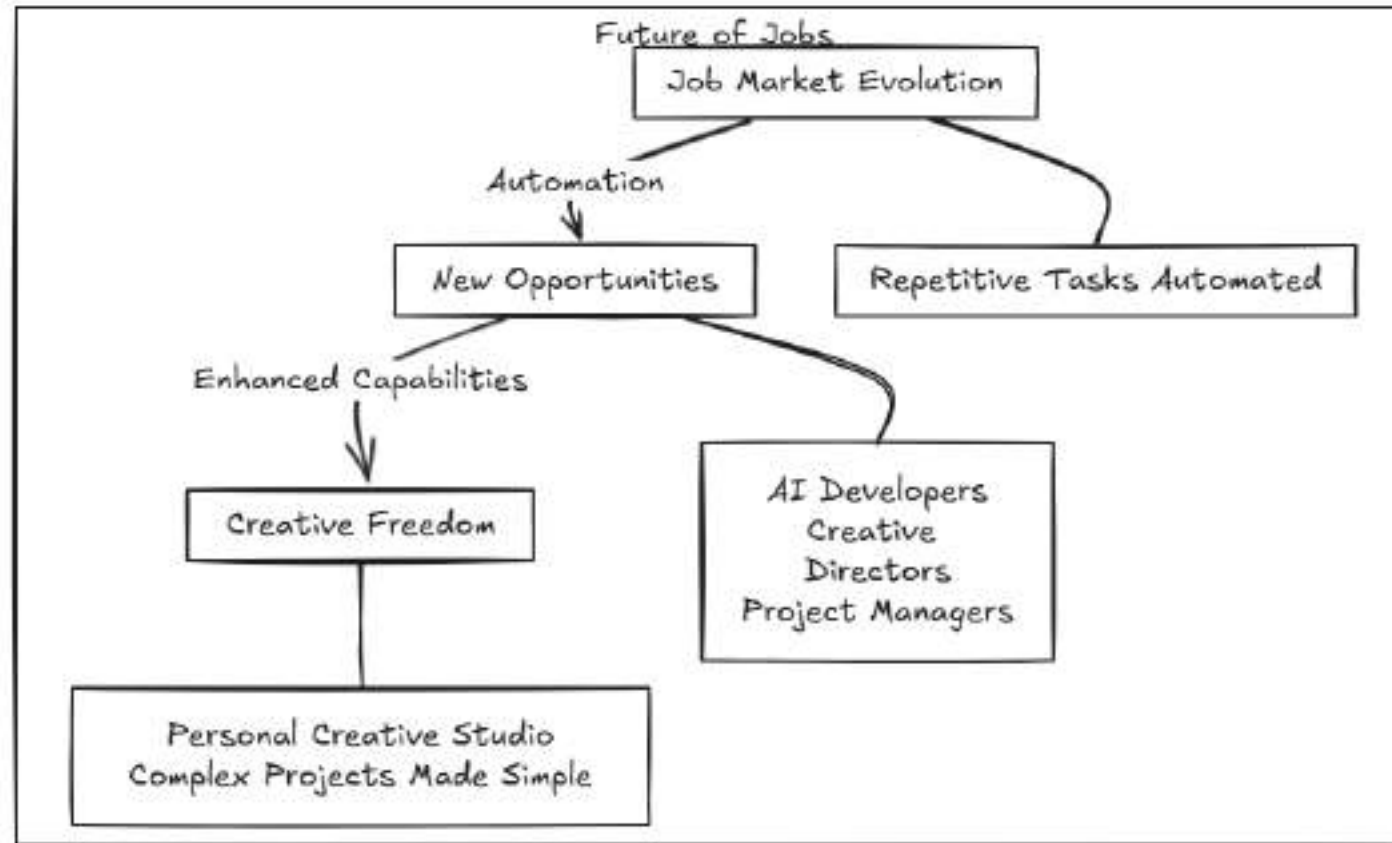
Practical Skills & Implementation

- Examples
 - Create your CV using LLMs
 - Summarize Emails
 - Create Content
 - Code Assistant



Future Perspectives & Ethics

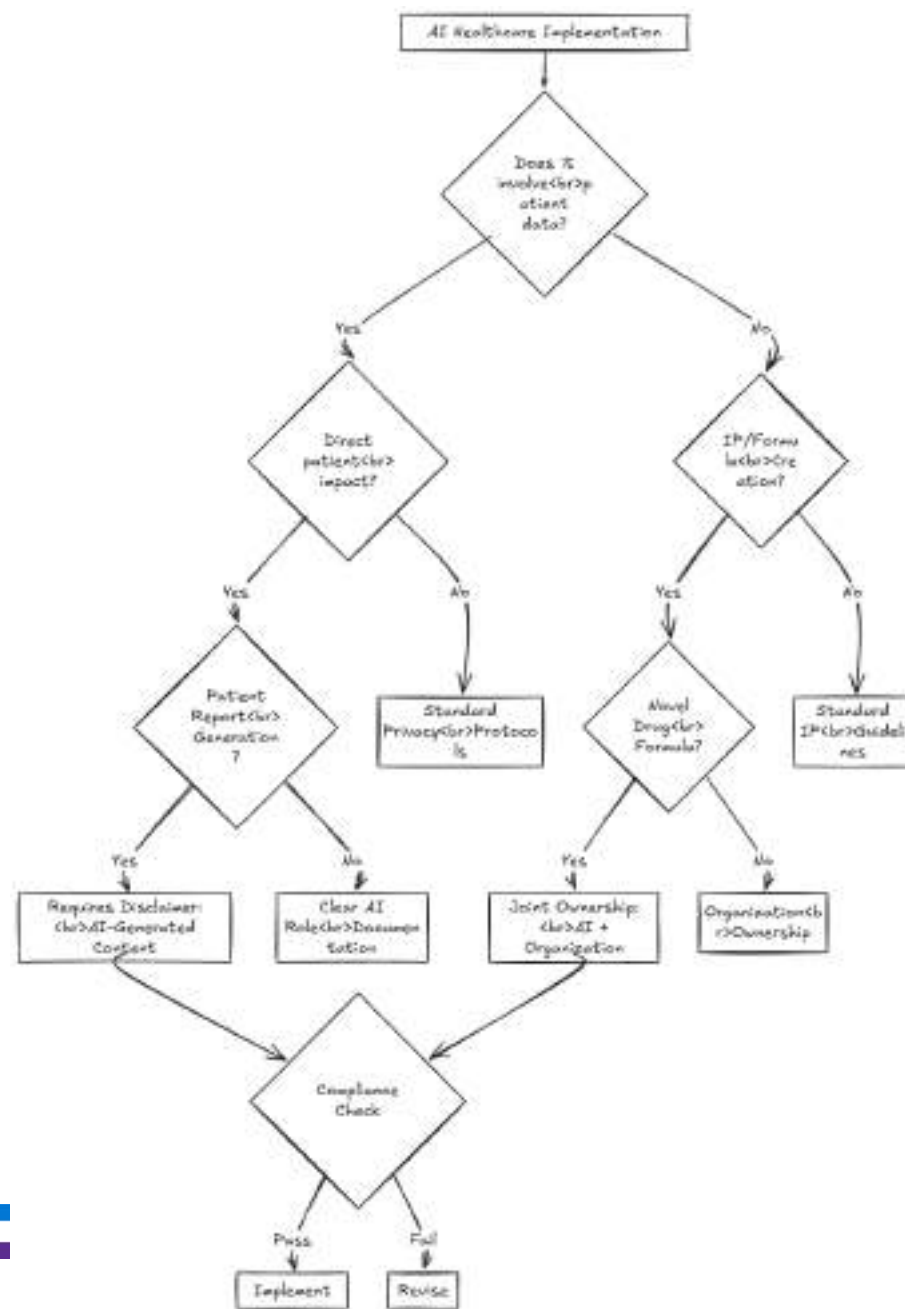
- Future Of Jobs



Future Perspectives & Ethics

- Ethics: Scenario Discussion

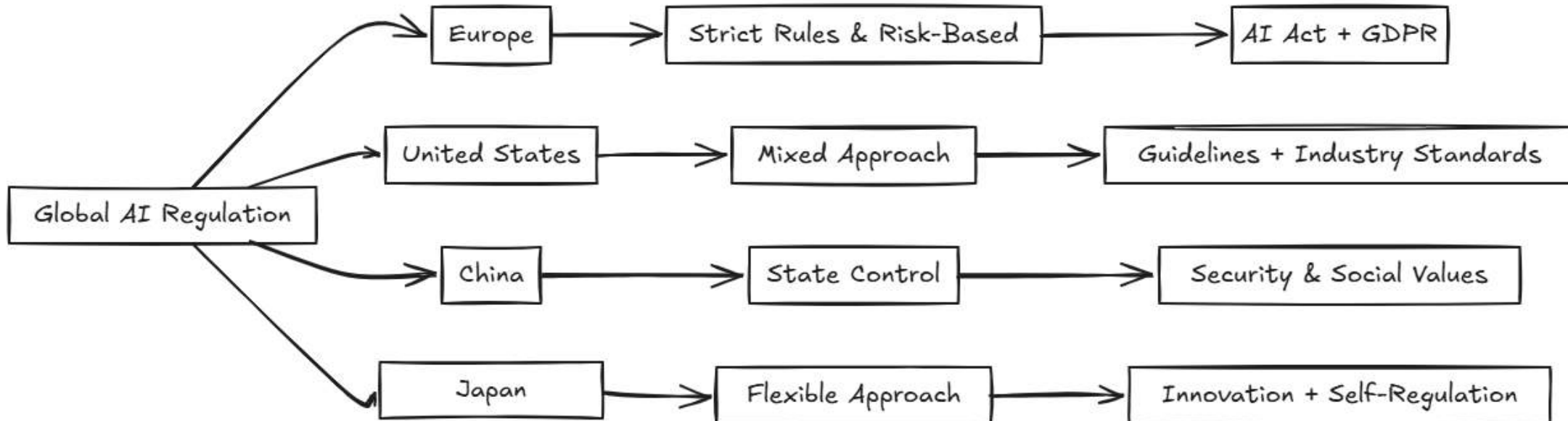




Future Perspectives & Ethics

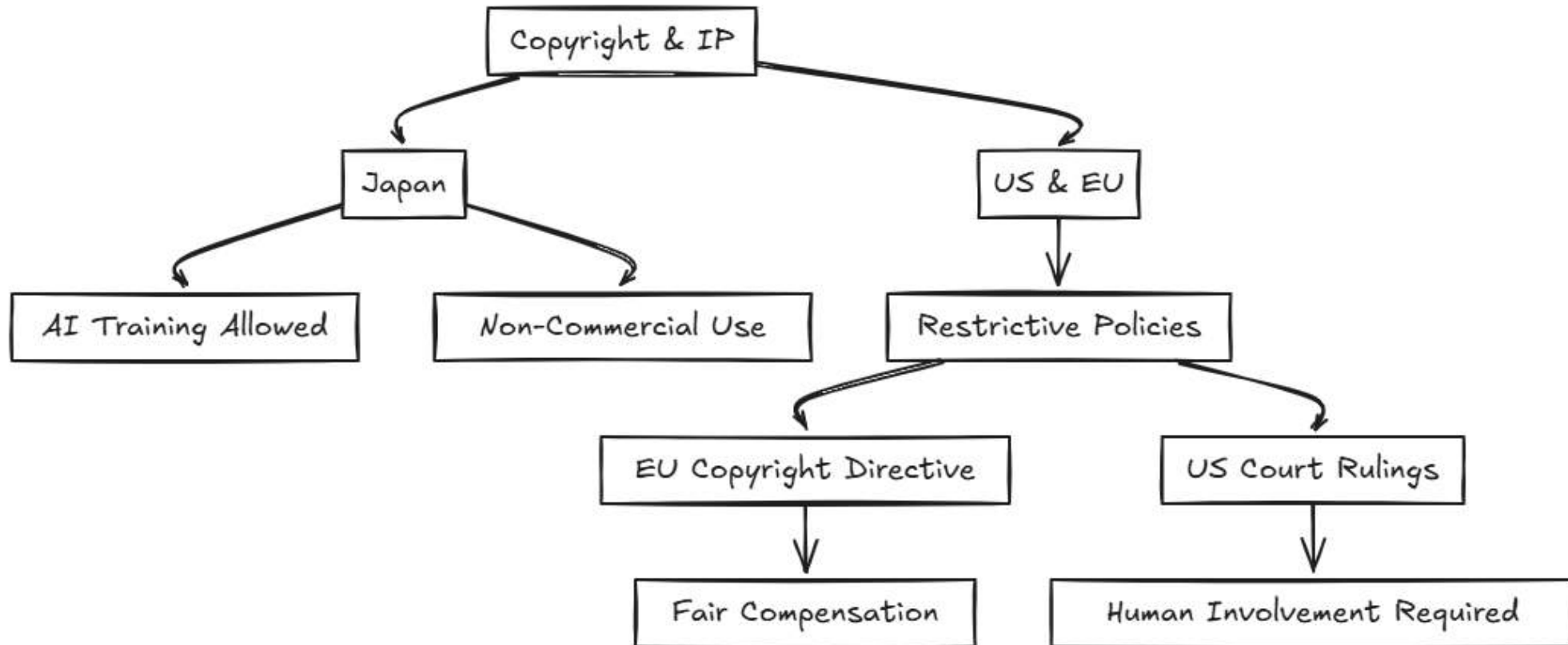
- Global Regulatory Approaches

General Data Protection Regulation



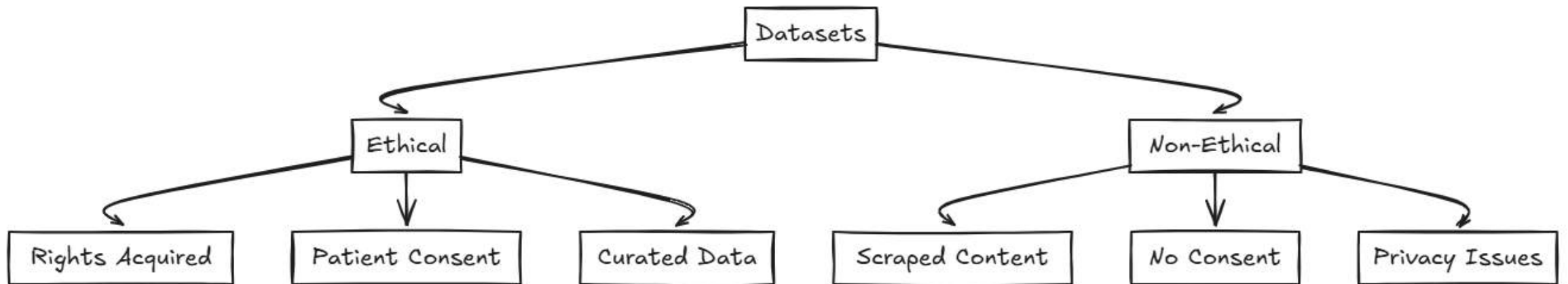
Future Perspectives & Ethics

- Copyright



Future Perspectives & Ethics

- Ethical Vs Non-Ethical Datasets



Conclusion

- It is humans that created AI and made amazing , not AI itself .
- AI isn't smart , doesn't have emotions , it's only math + algorithms



Any questions ?