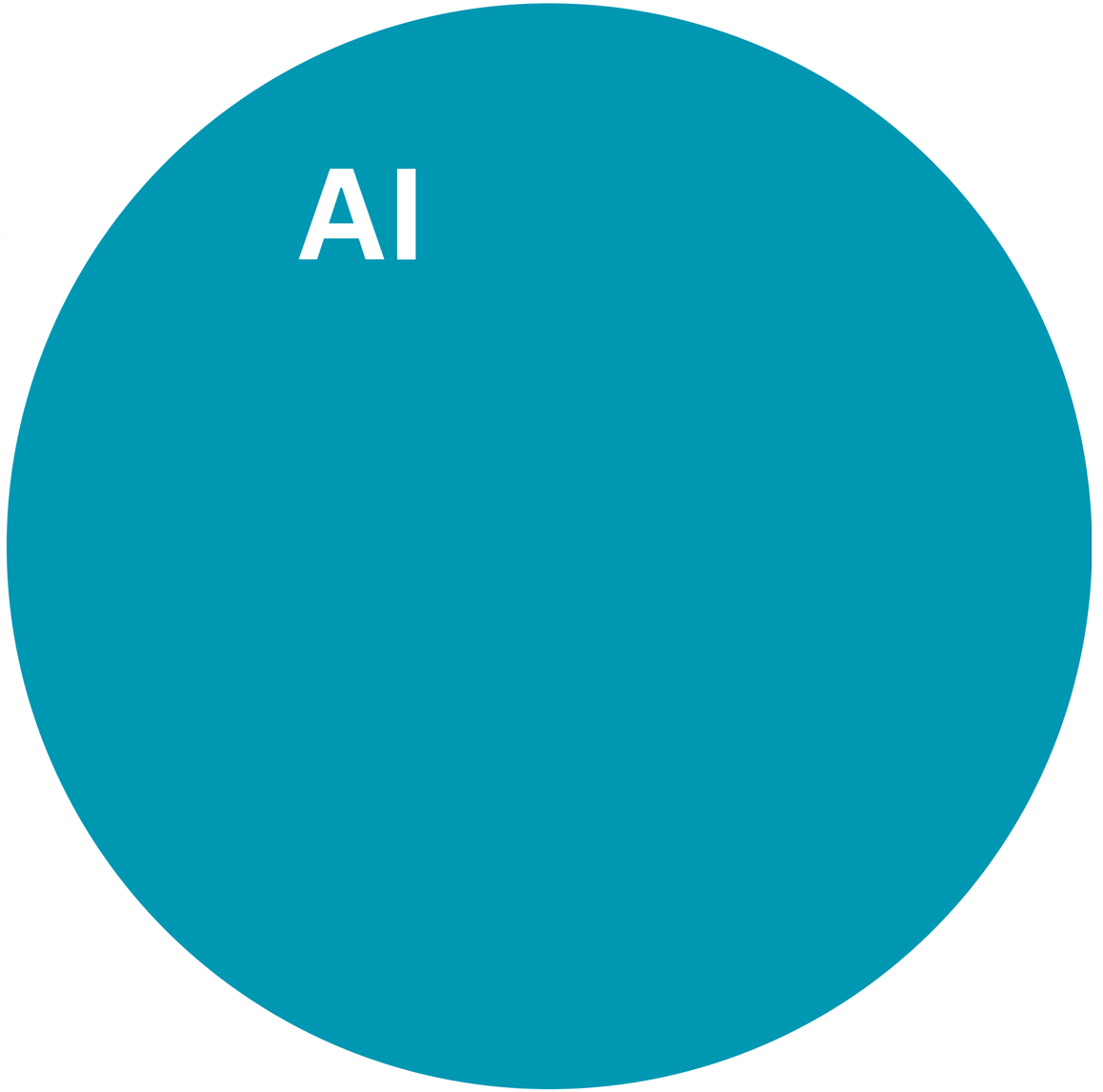
Artificial Intelligence Vs. Machine Learning Vs. Deep Learning

Understanding the difference and similarities

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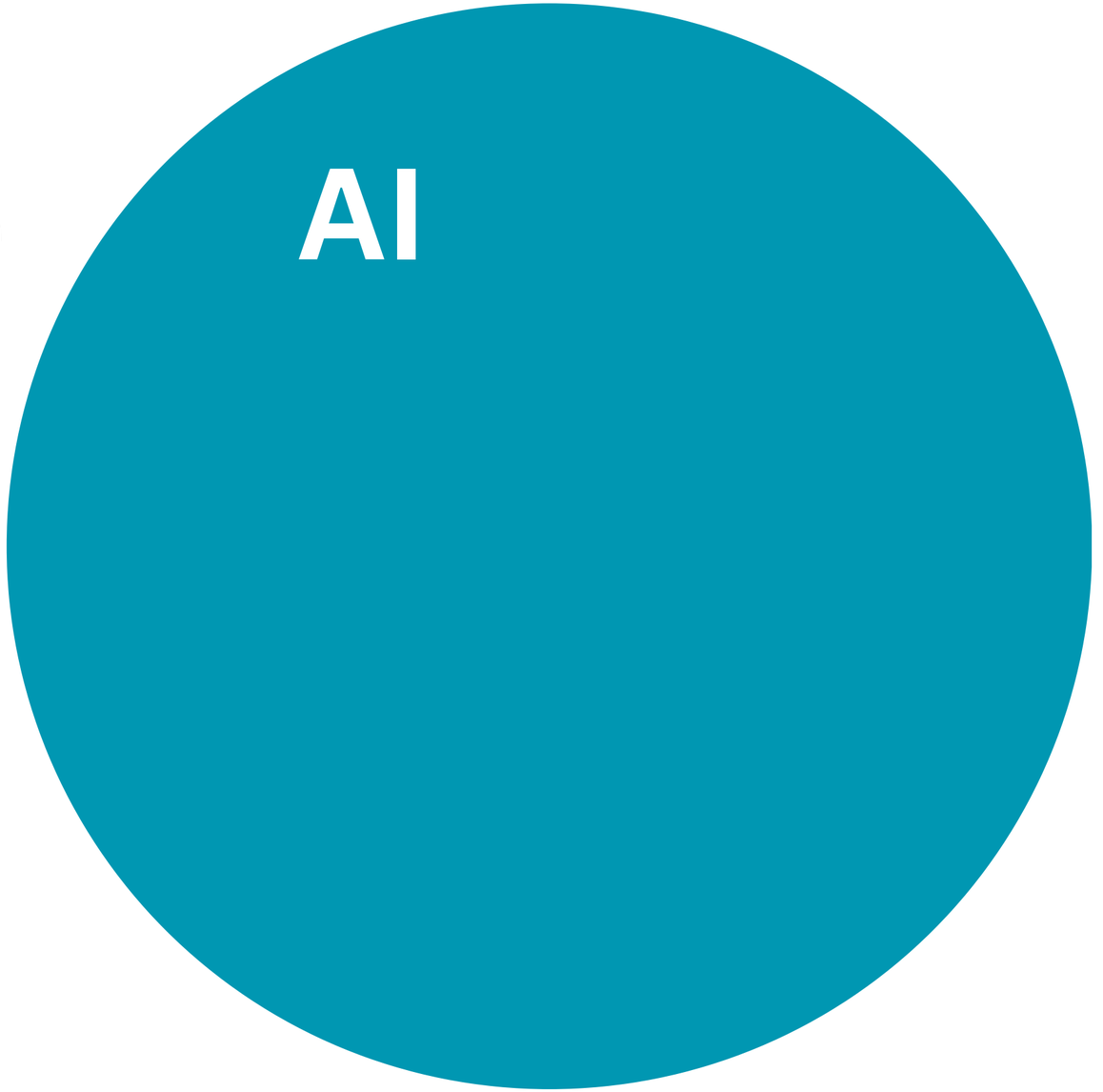
Artificial Intelligence

- AI is the broader concept that encompasses ML and other techniques.



Artificial Intelligence

- AI may involve rule-based systems, knowledge representation, and learning from data.



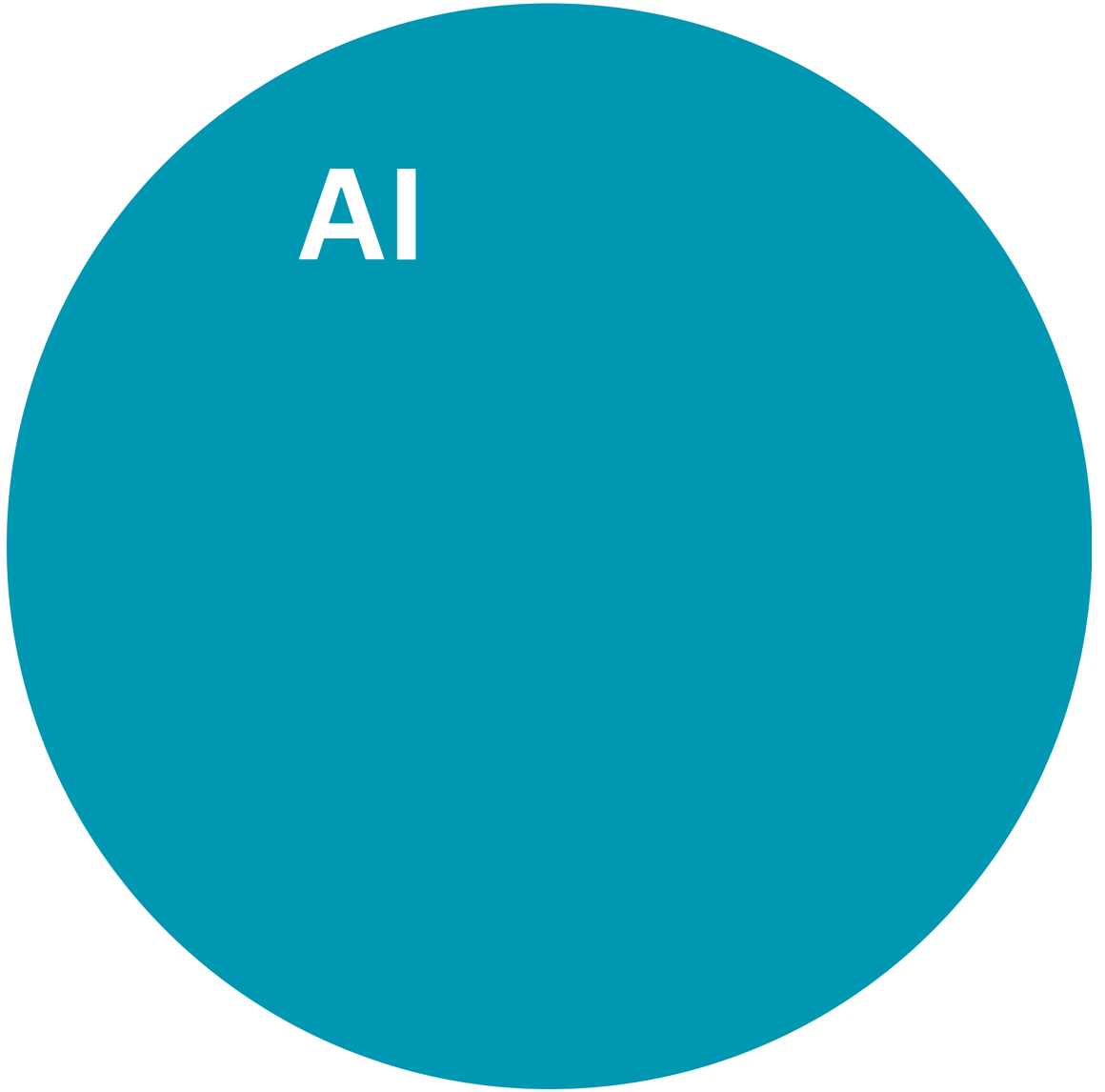
Artificial Intelligence





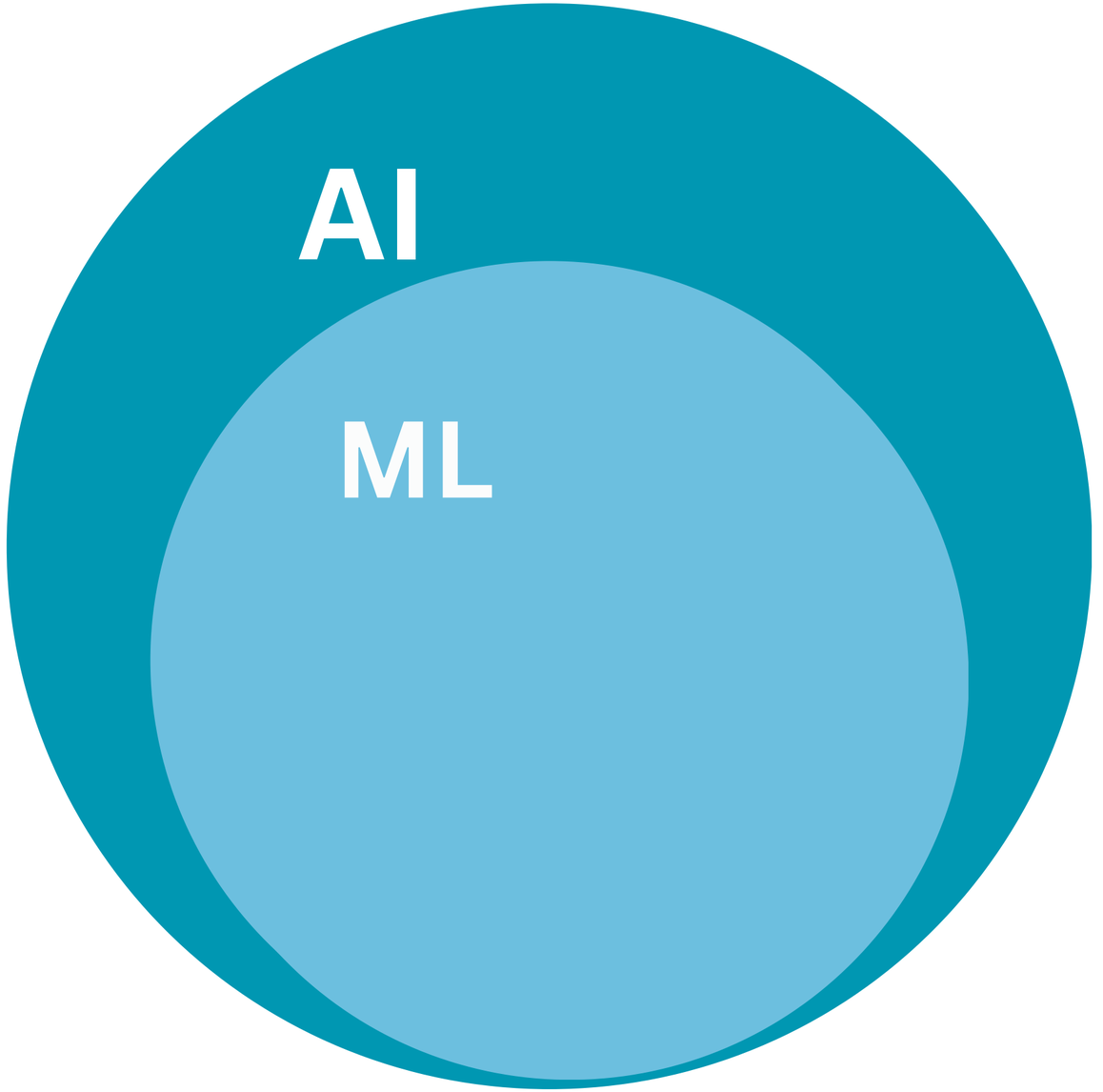
Siri

- Recommendation system
- Chess playing progammed



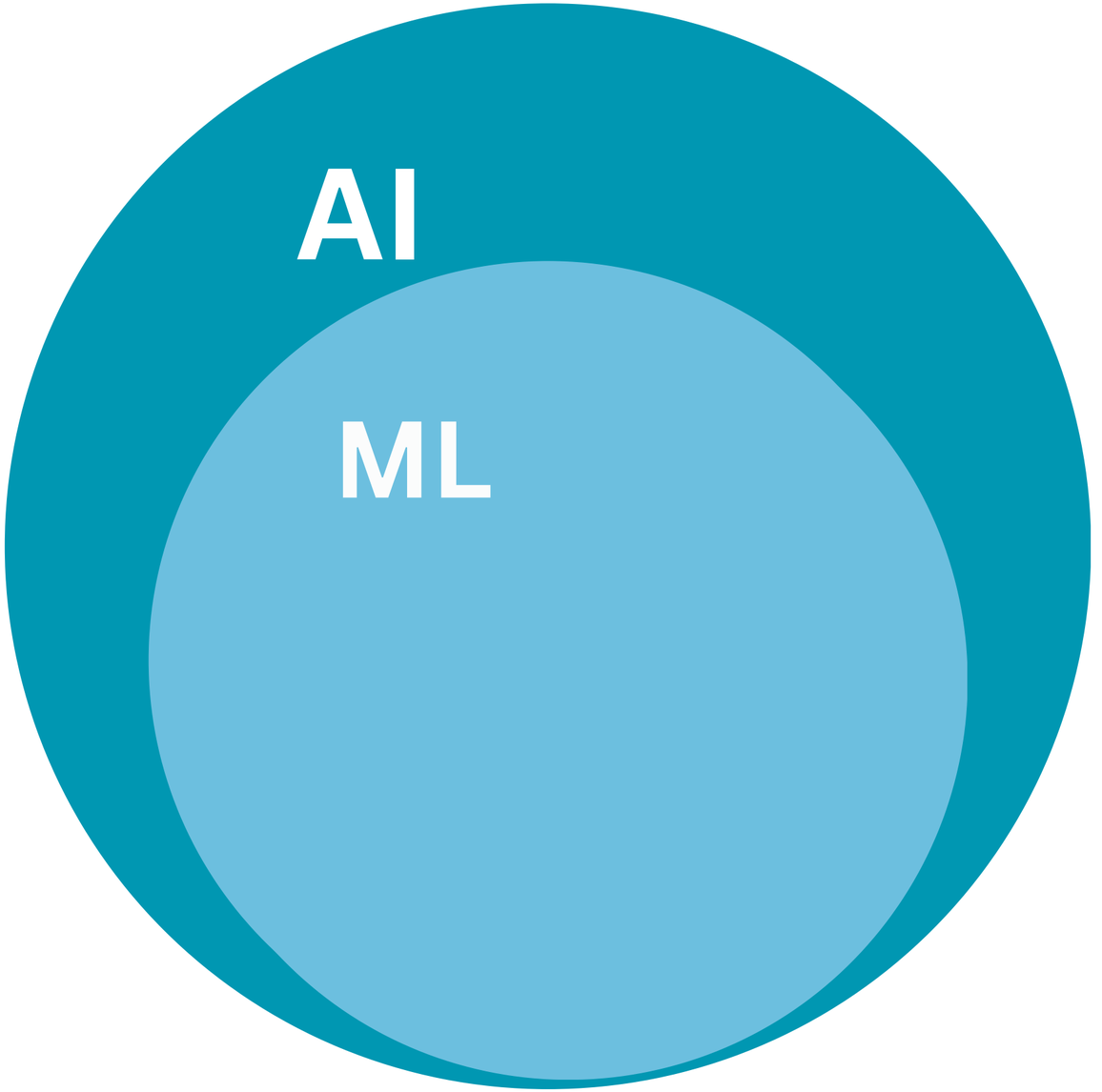
Machine Learning

- ML is a subset of AI that focuses on learning from data.



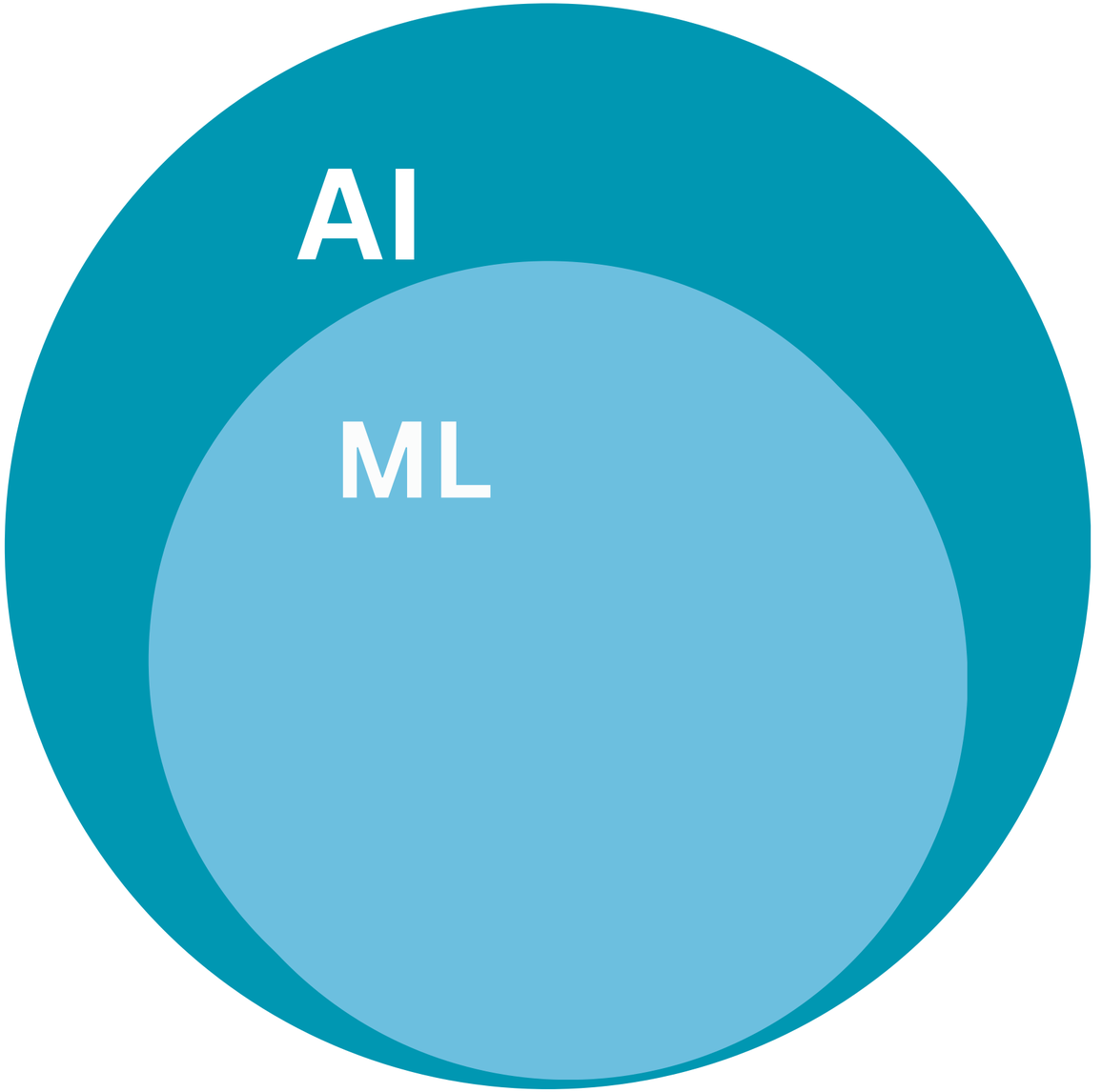
Machine Learning

- It can be supervised, unsupervised, and reinforcement learning



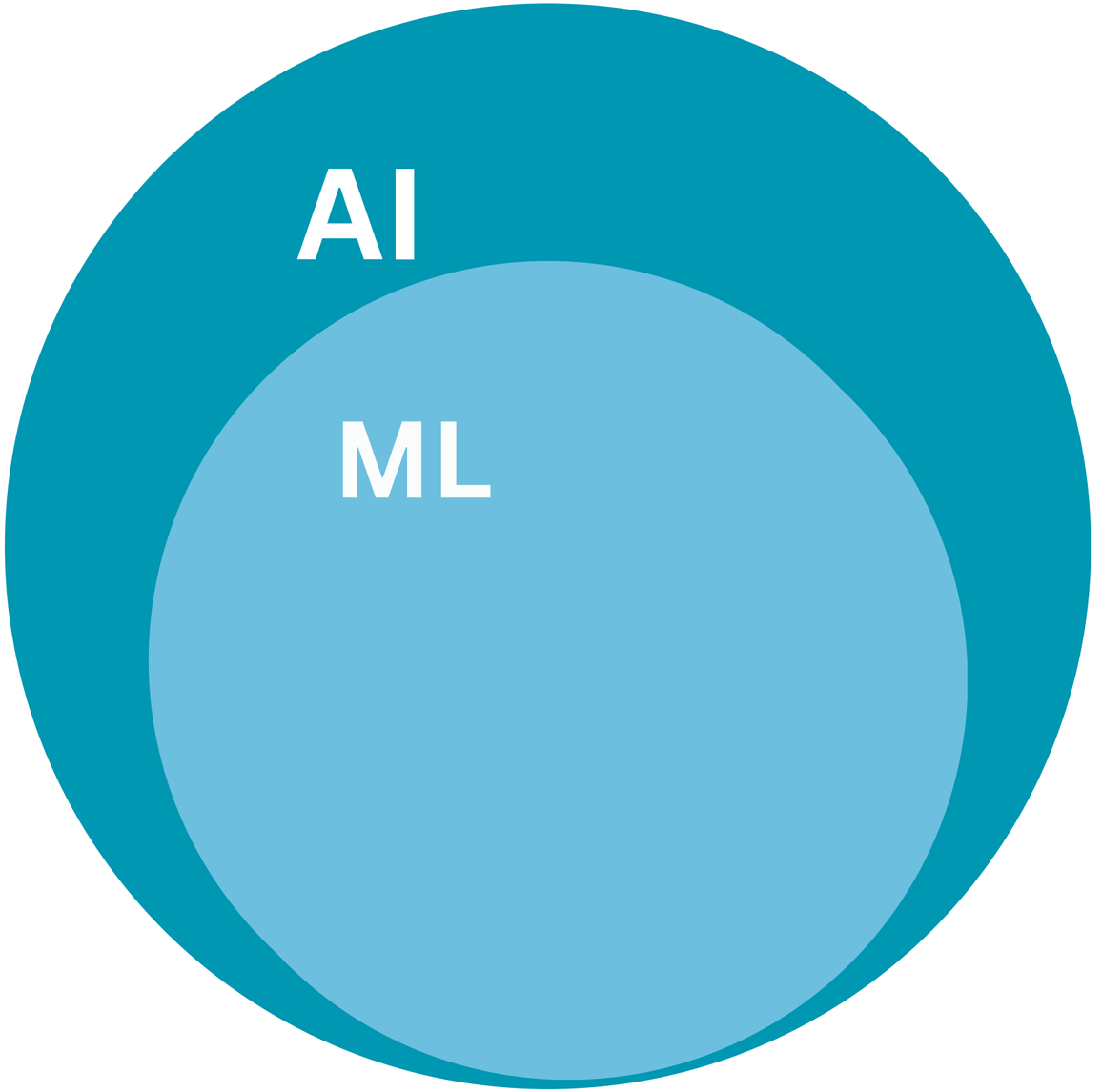
Machine Learning

- ML relies on learning patterns from data and making predictions or decisions.



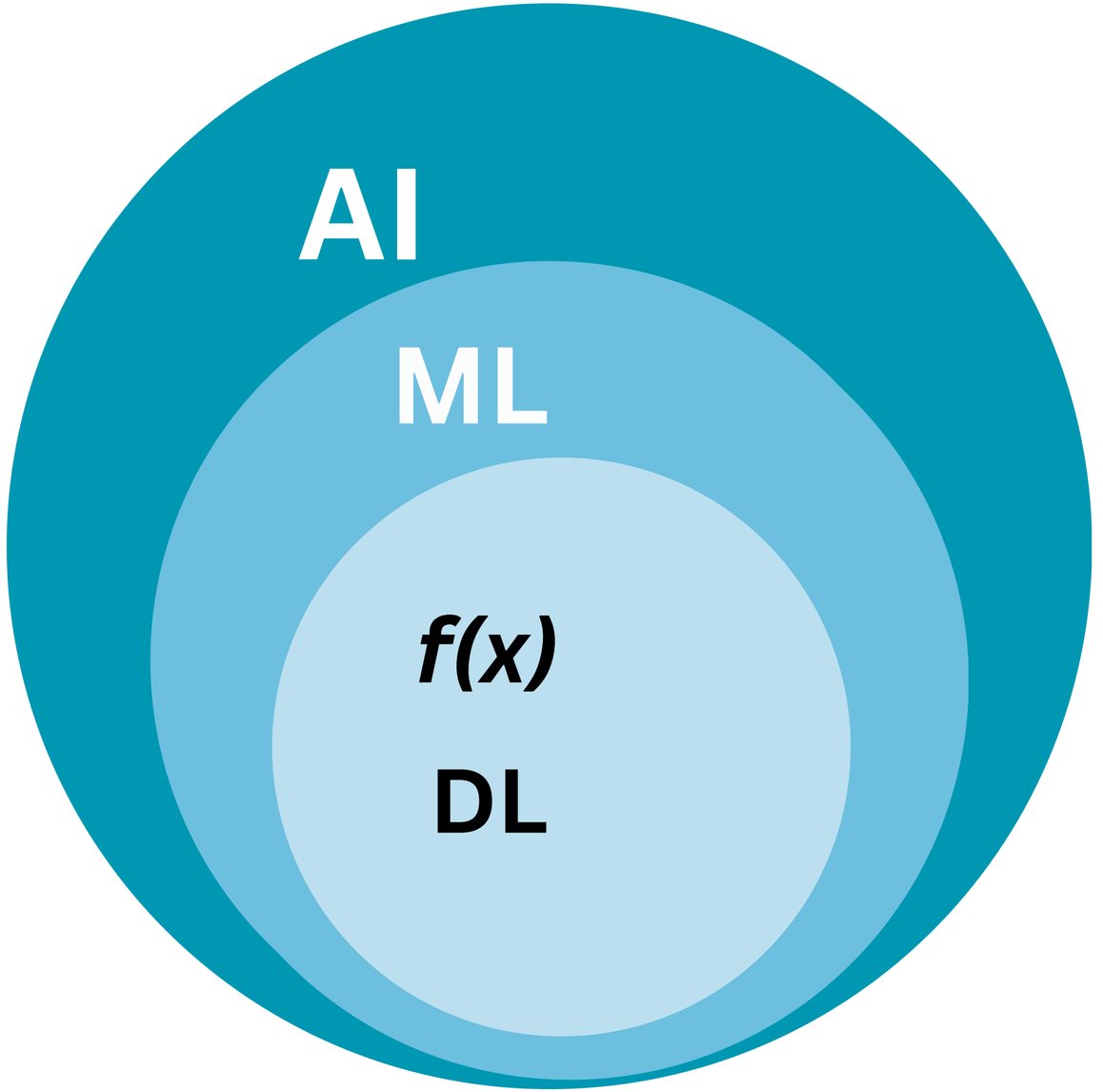
Machine Learning

- Image Recognition
- Spam Filtering
- Predictive Analytics
- Recommendation Systems



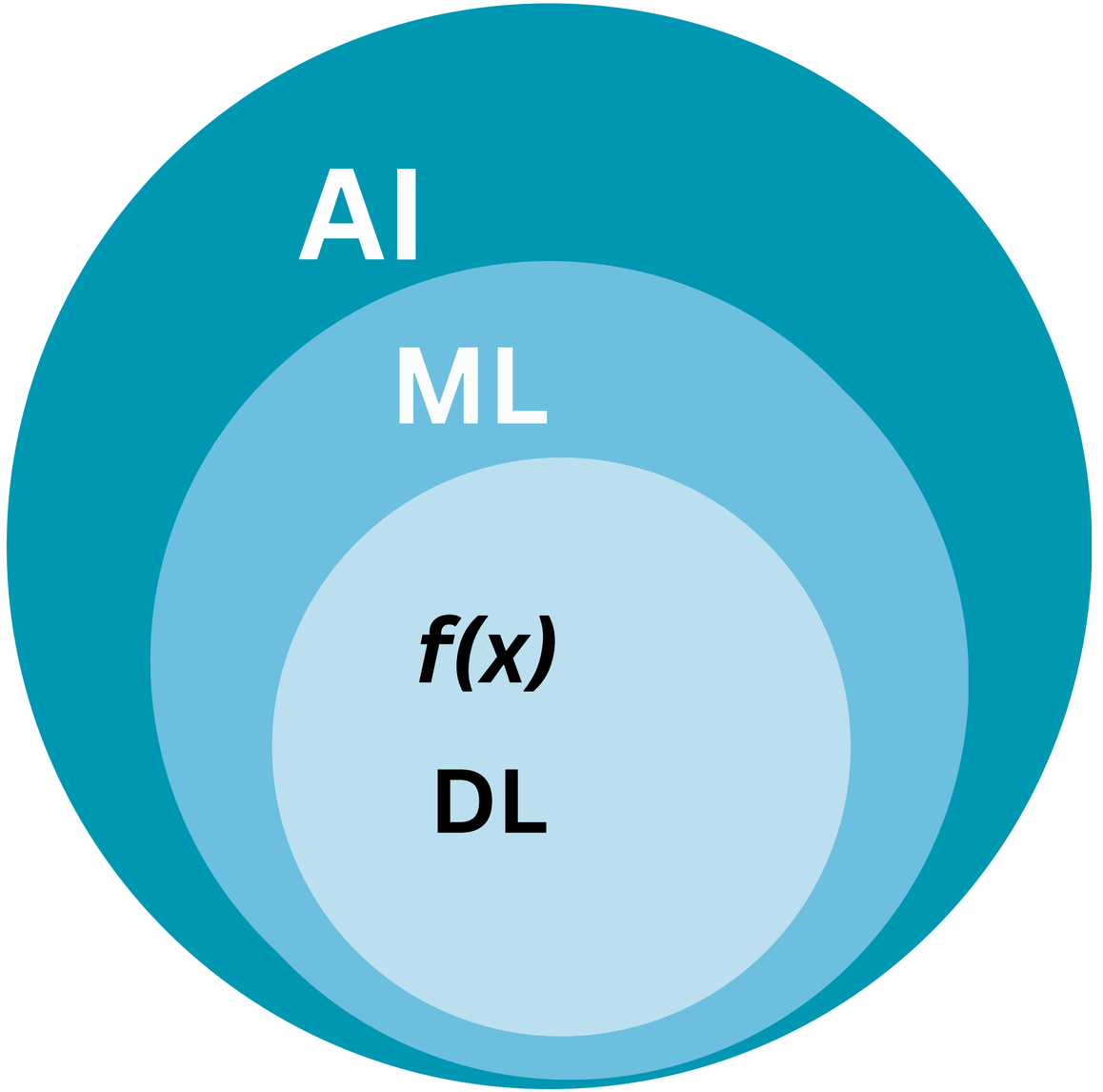
Deep Learning

- DL is a specialized subset of ML that uses deep neural networks.



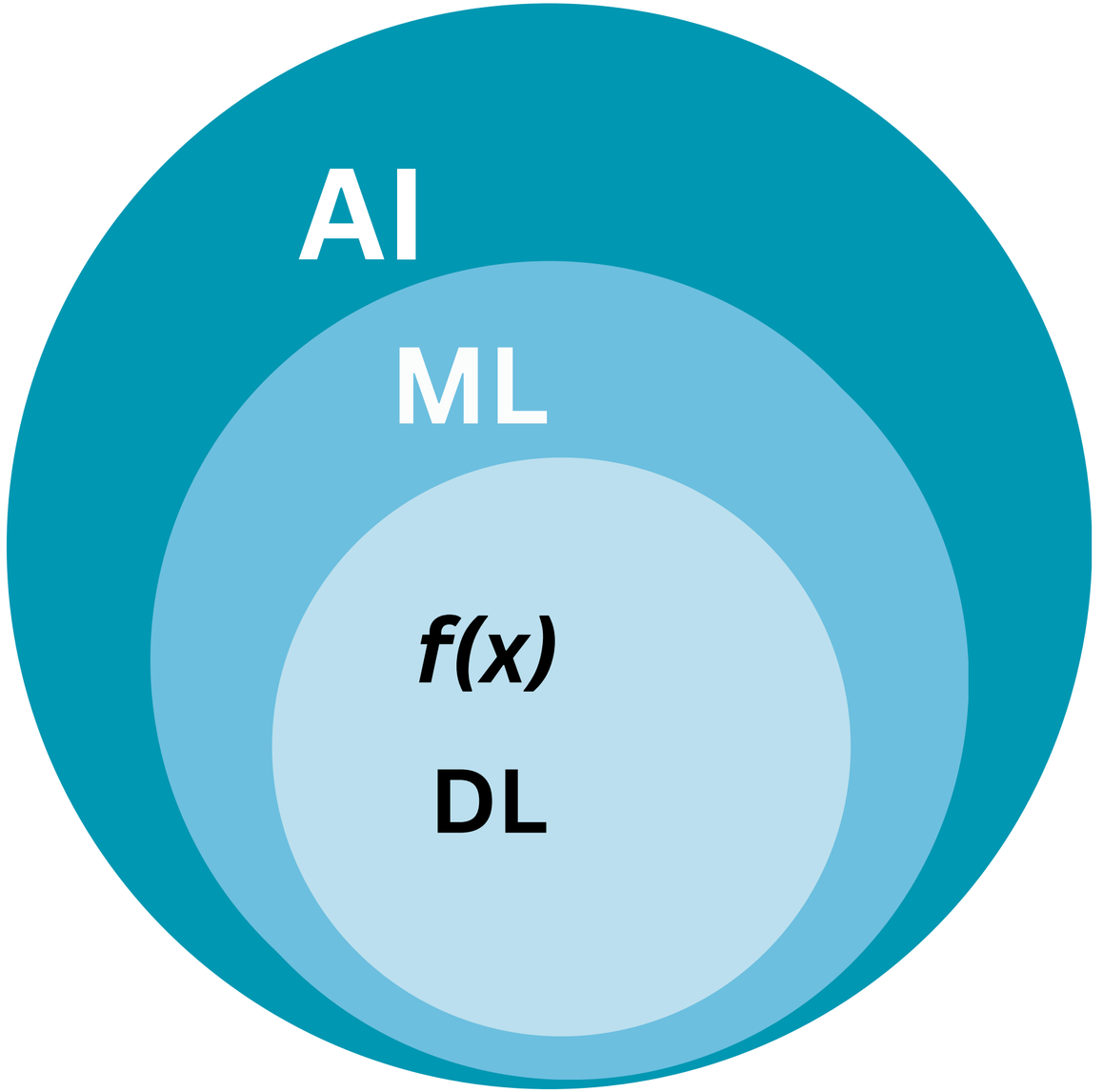
Deep Learning

- DL specifically involves deep neural networks and hierarchical feature learning.



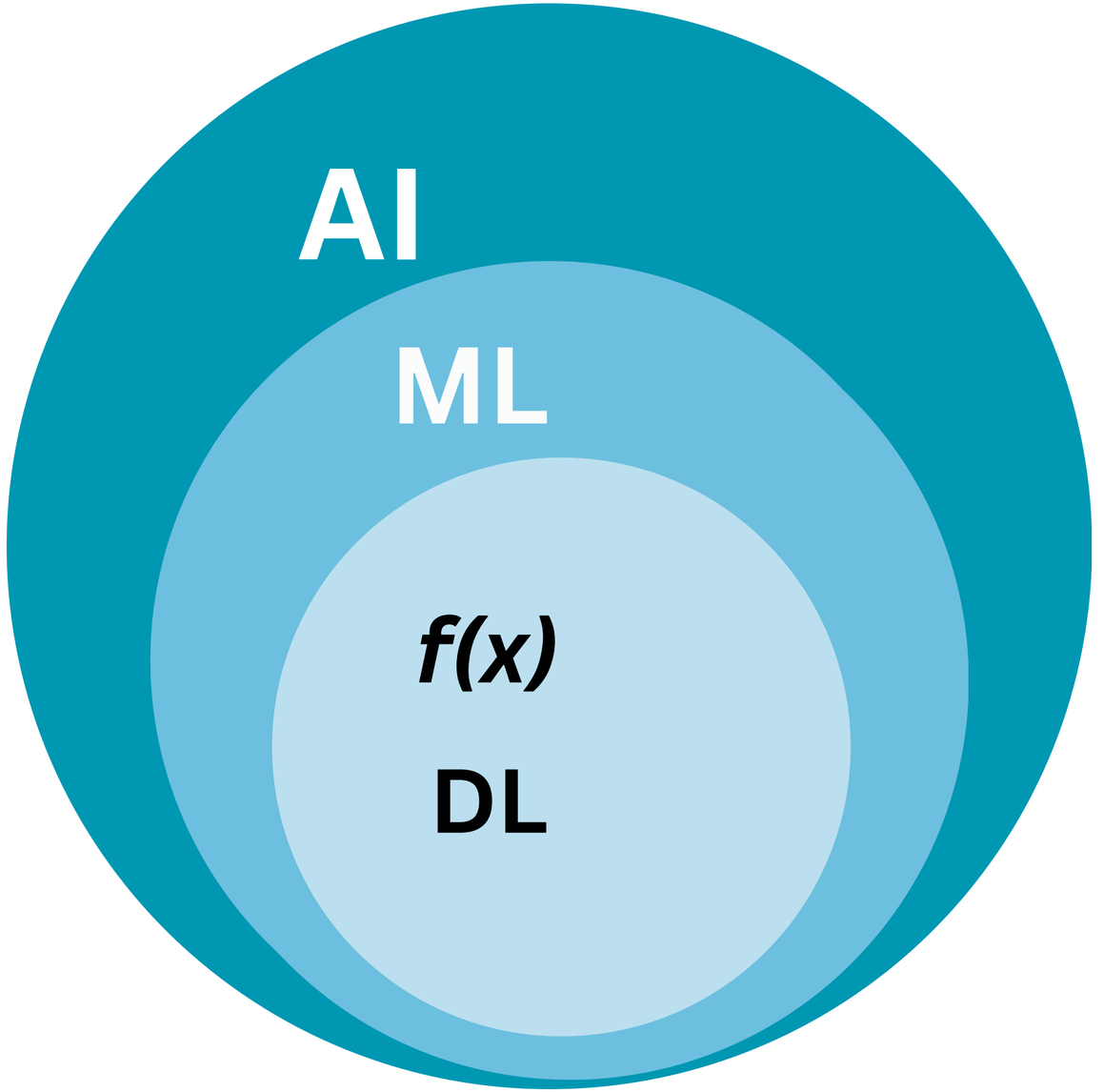
Deep Learning

- DL learns hierarchical representations automatically.



Deep Learning

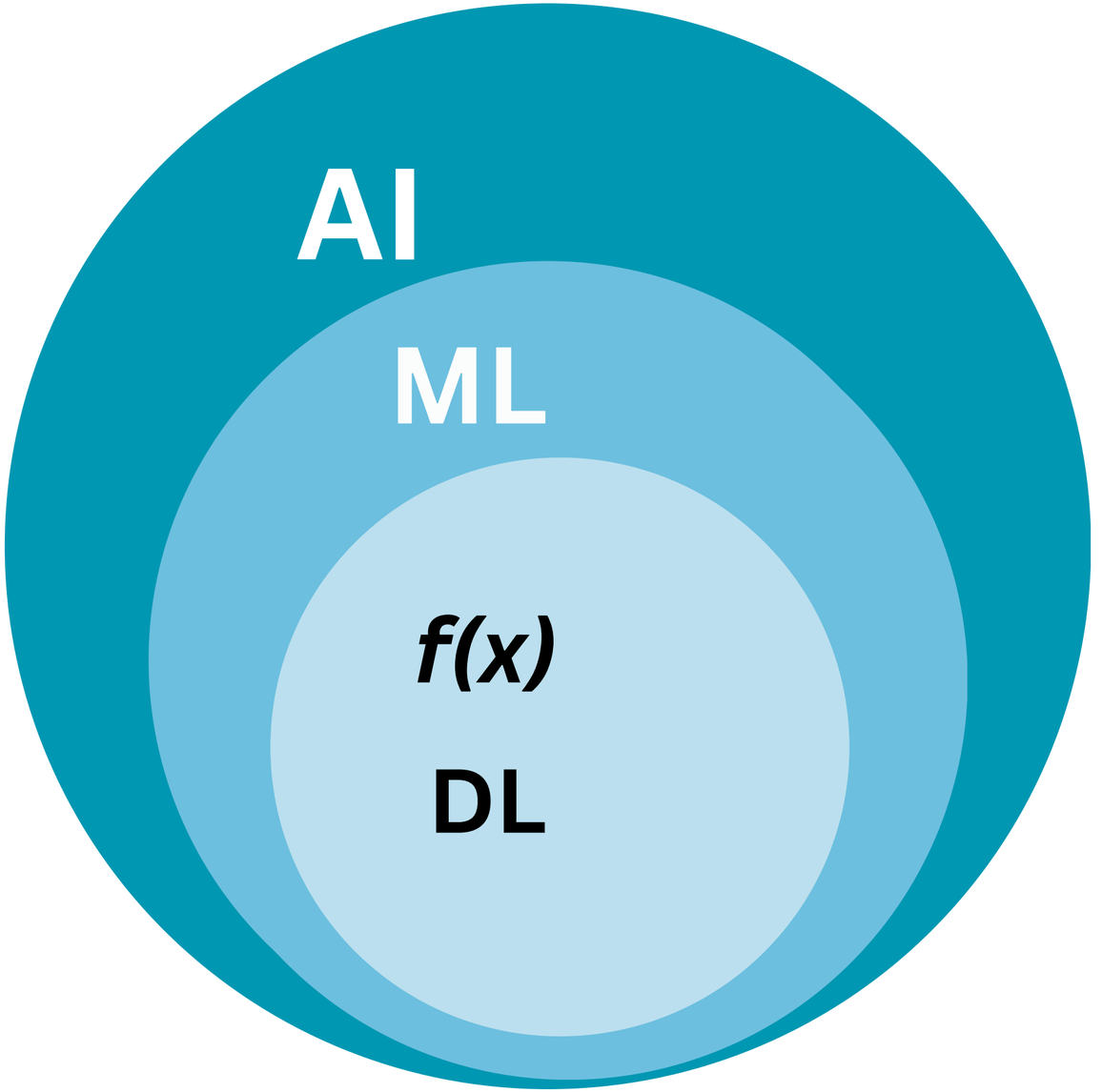
- It can be used to implement:
- Image and speech recognition,
- natural language processing,
- and autonomous systems.



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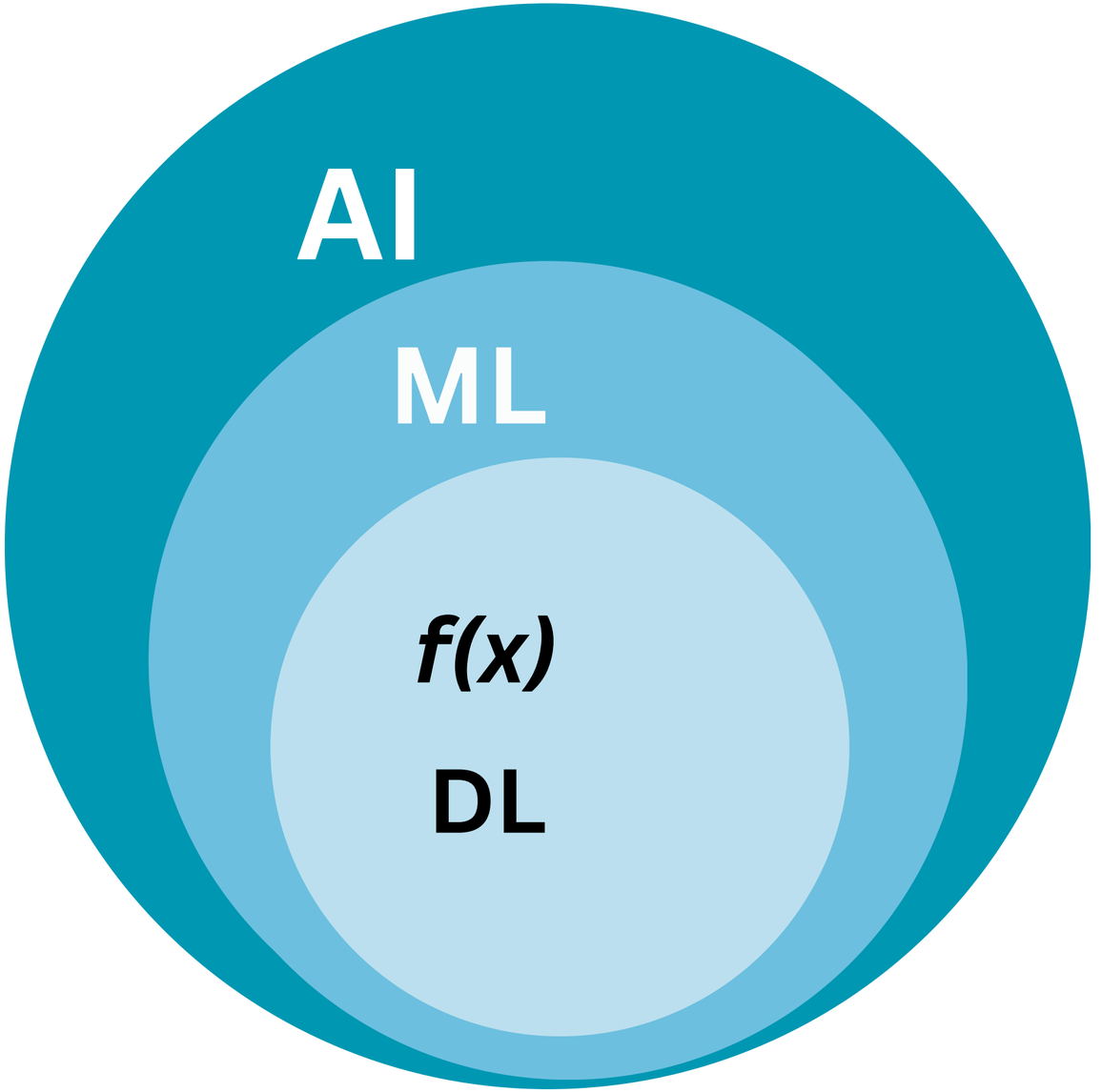
Deep Learning

- CNN for image recognition
- RNN for sequential data
- Transformer Models for natural language processing



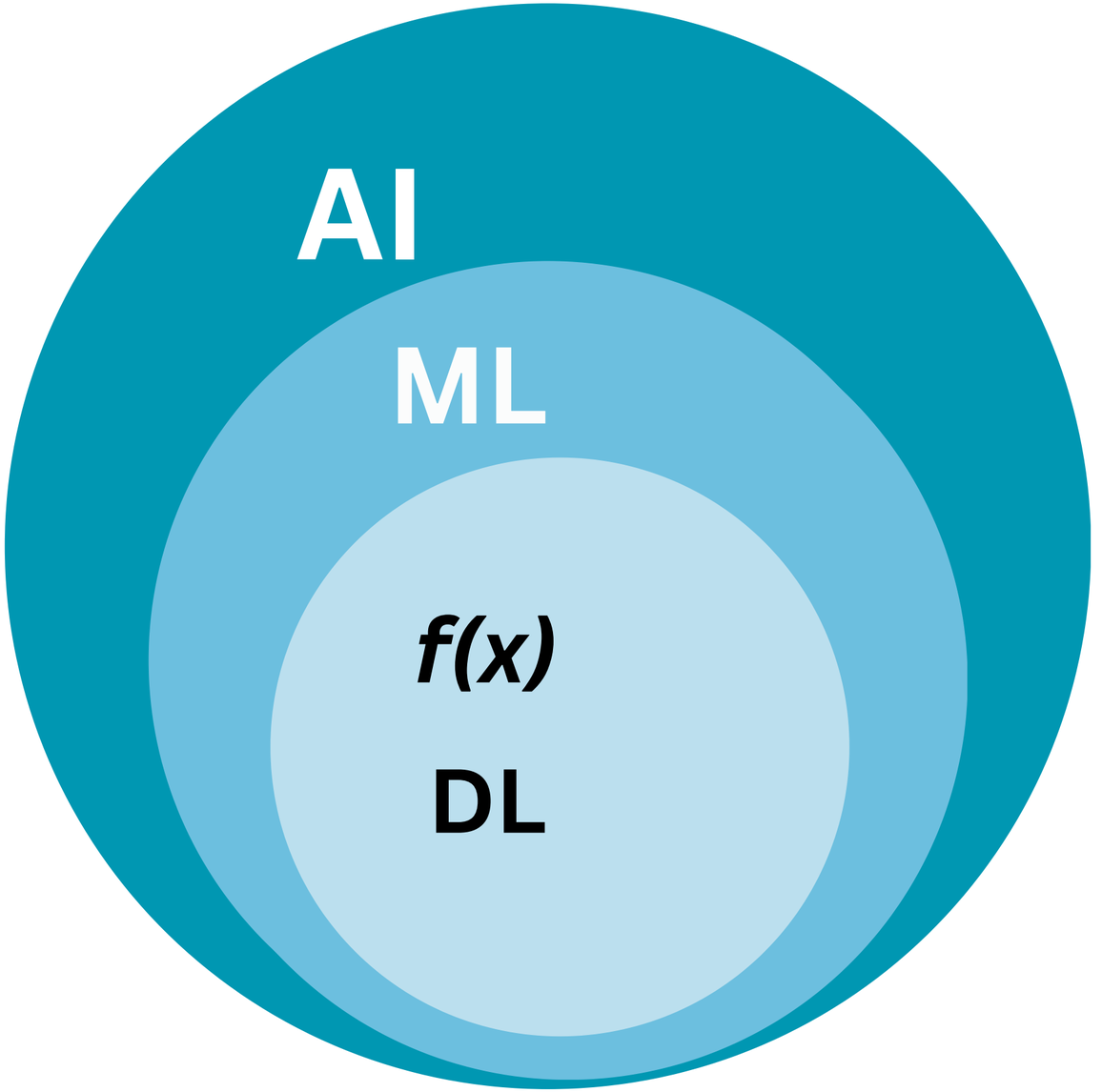
Similarities

- All three aim to create intelligent systems capable of performing tasks that typically require human intelligence.



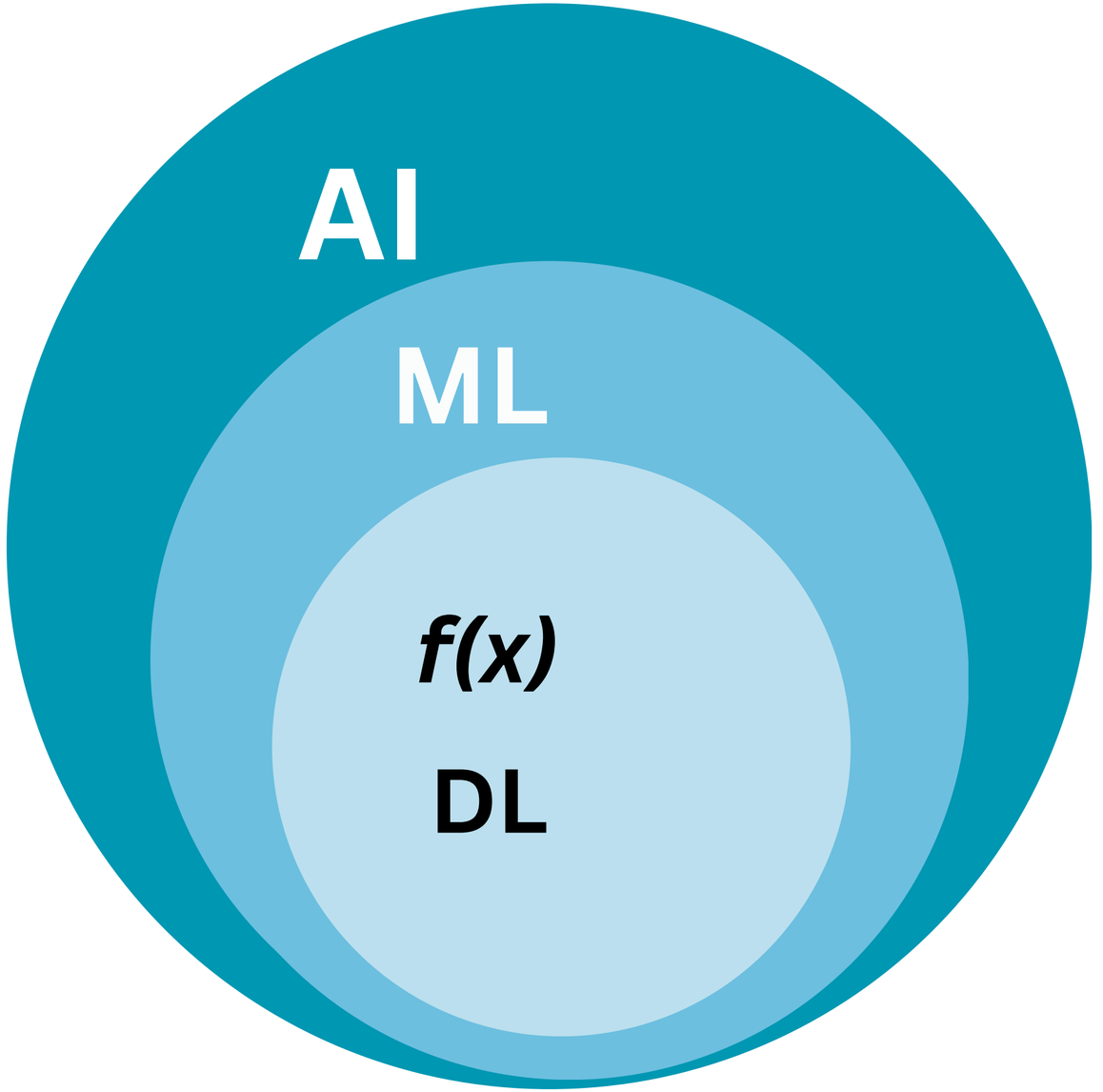
Similarities

- AI, ML, and DL systems can adapt and improve their performance over time based on experience and data.



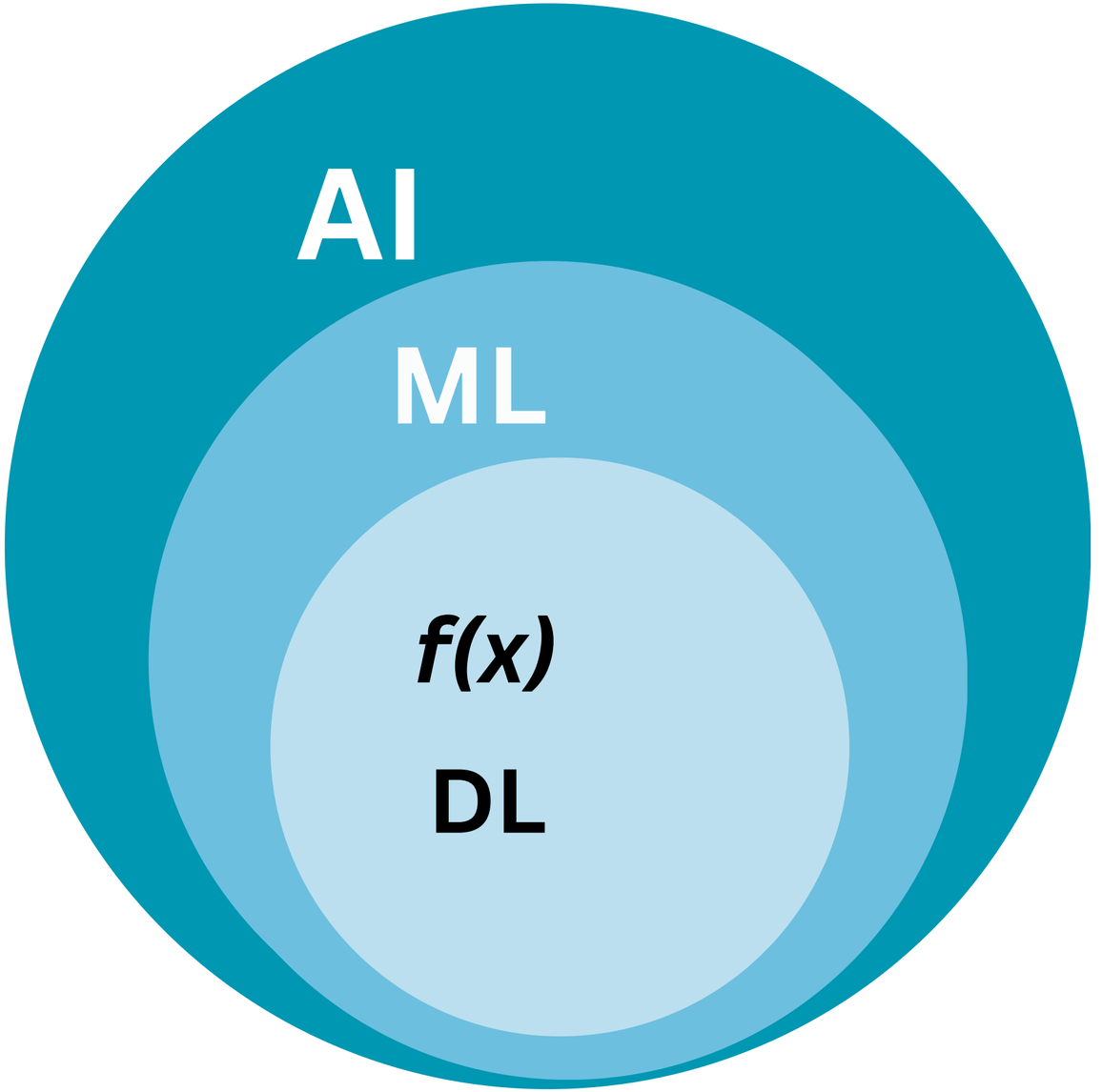
Similarities

- ML is a subset of AI, and DL is a subset of ML. The concepts are interconnected, and advancements in one field often influence the others.



Conclusion

- AI is the broader concept
- ML is a subset focused on learning from data,
- and DL is a specialized subset using deep neural networks for representation learning.



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