The AI Stack – A Blueprint for Developing & Deploying AI

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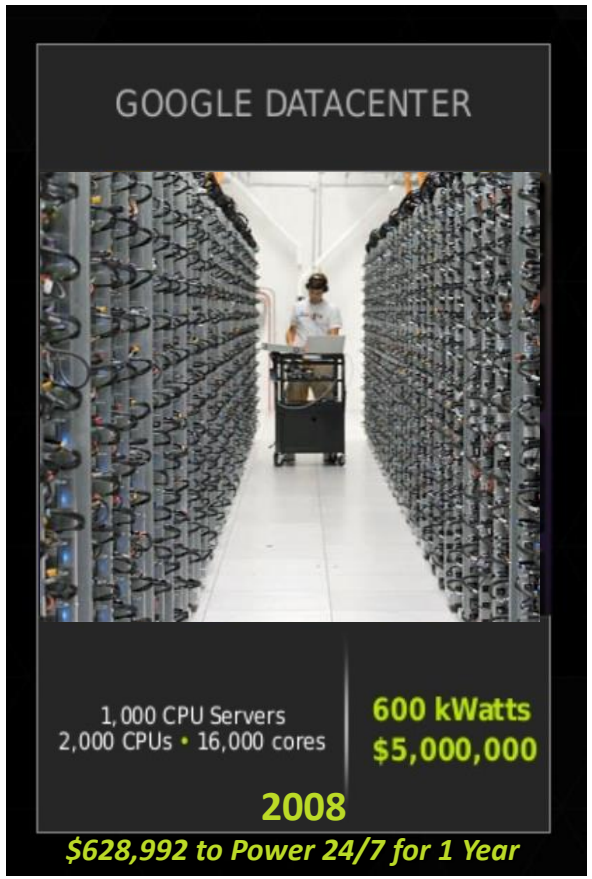
COMPUTE: Setting the Stage for the AI Revolution



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Source: Wired

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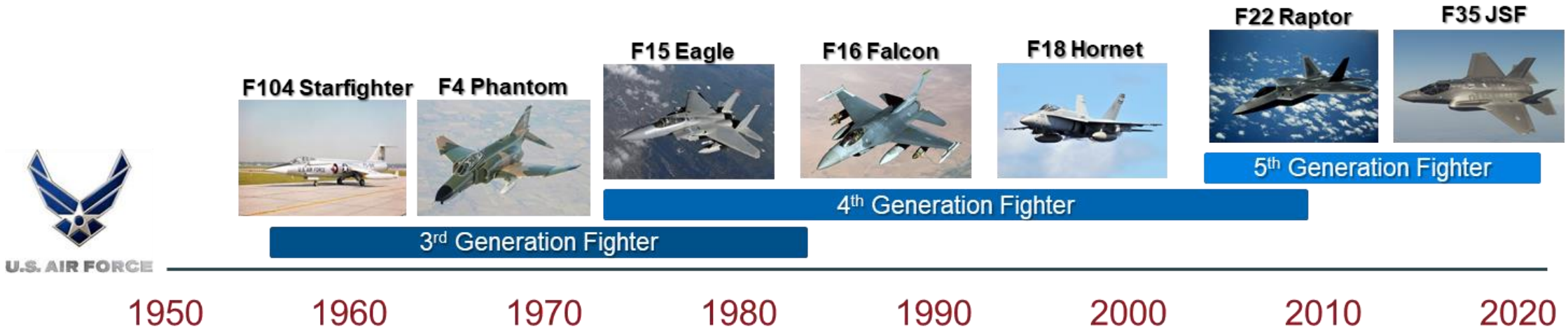
Pace of Innovation in Artificial Intelligence



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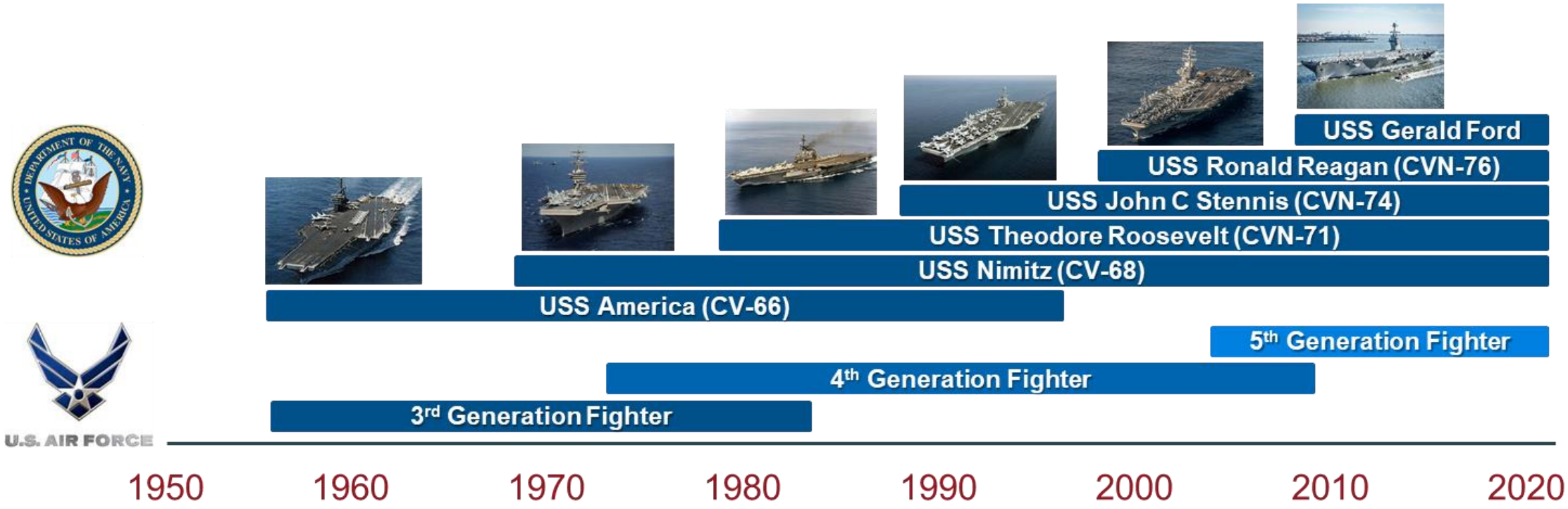
Pace of Innovation in Artificial Intelligence



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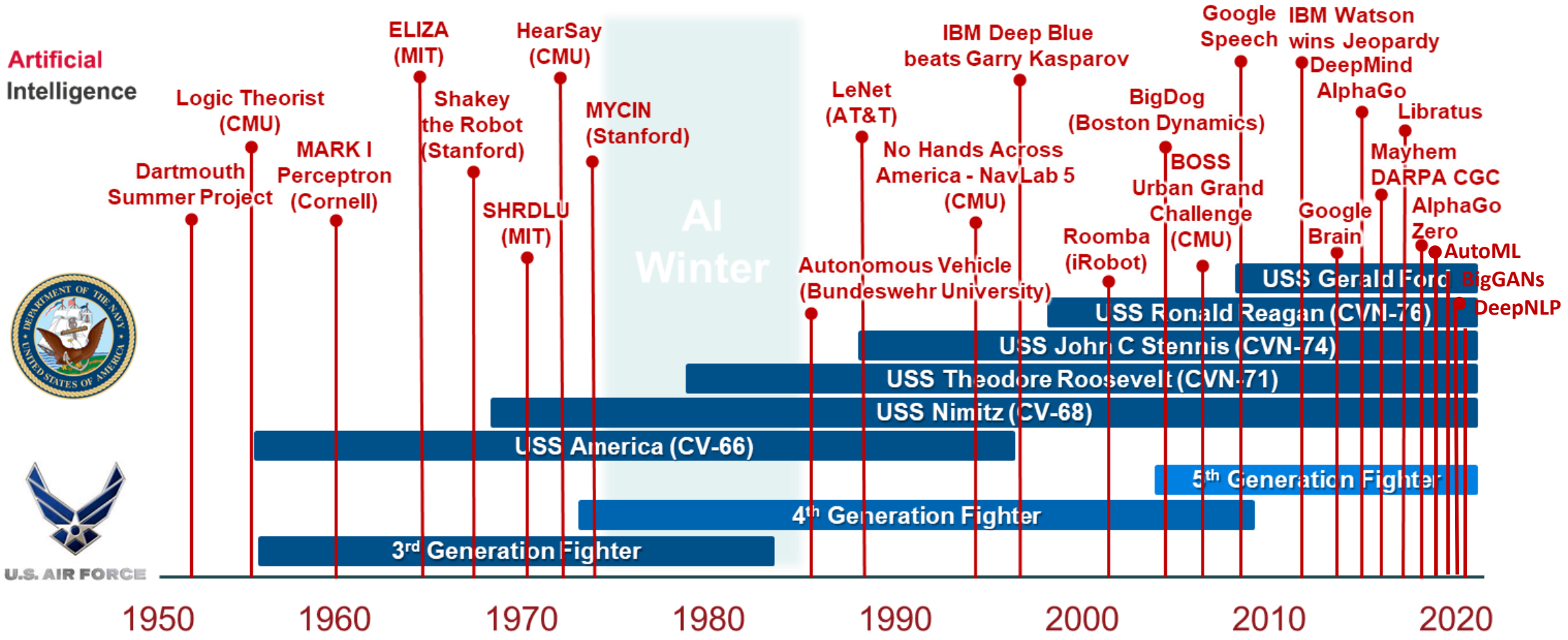
Pace of Innovation in Artificial Intelligence



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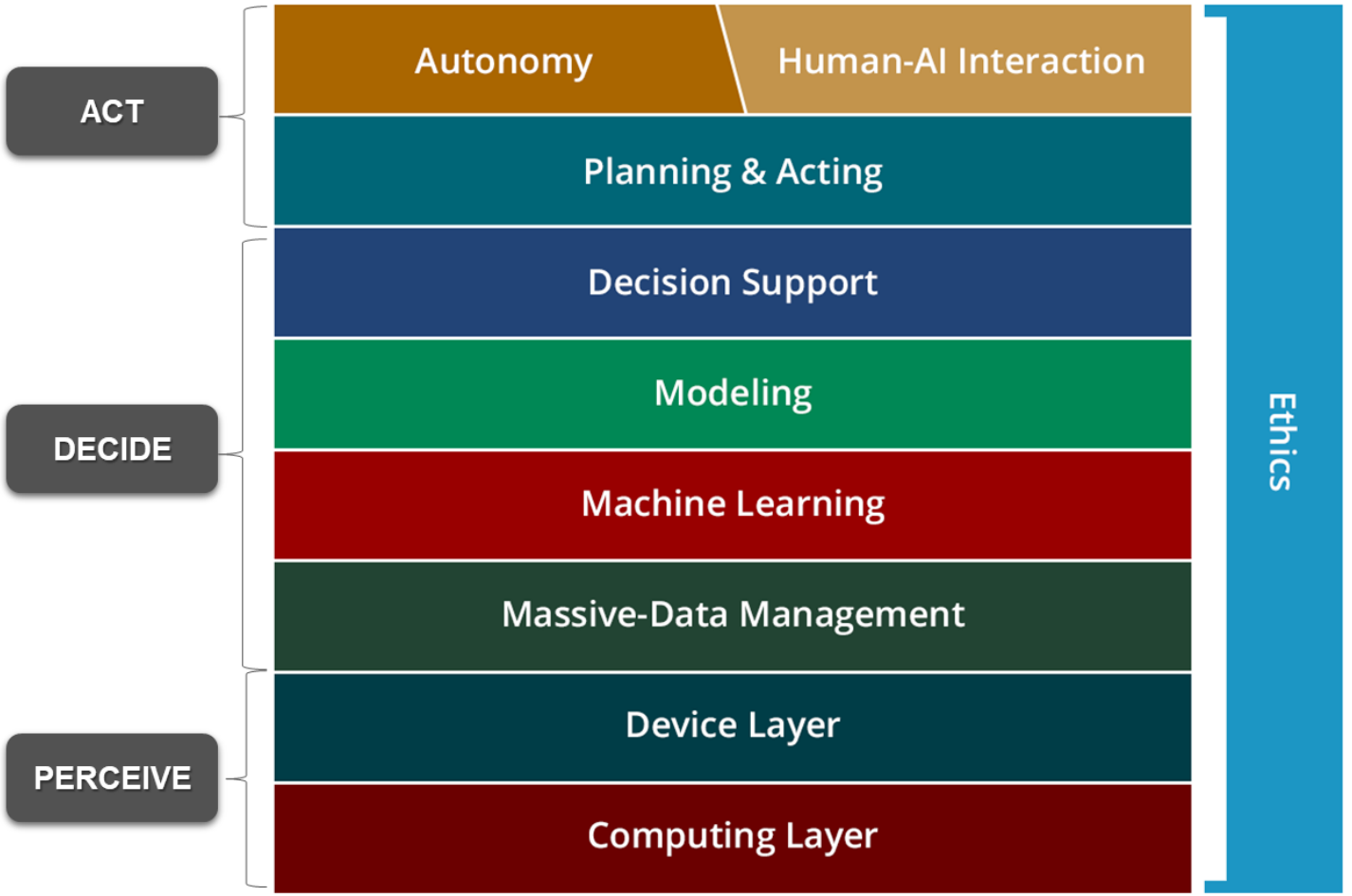
The AI Stack

- Each layer of the AI Stack is directly interconnected to the layers above and below it – so innovations in one layer have a direct impact on the others
- Each section of the AI Stack provides very distinctive functionality and purpose towards enabling Artificial Intelligence & Human-Machine Teaming

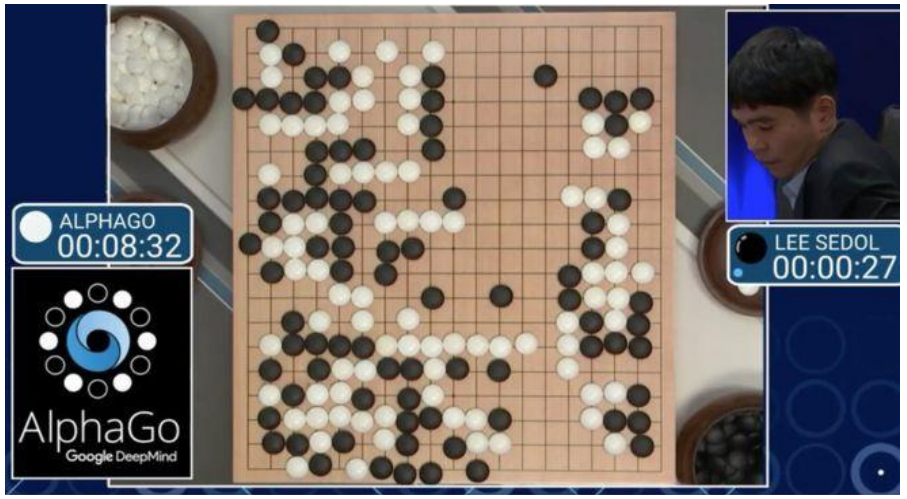


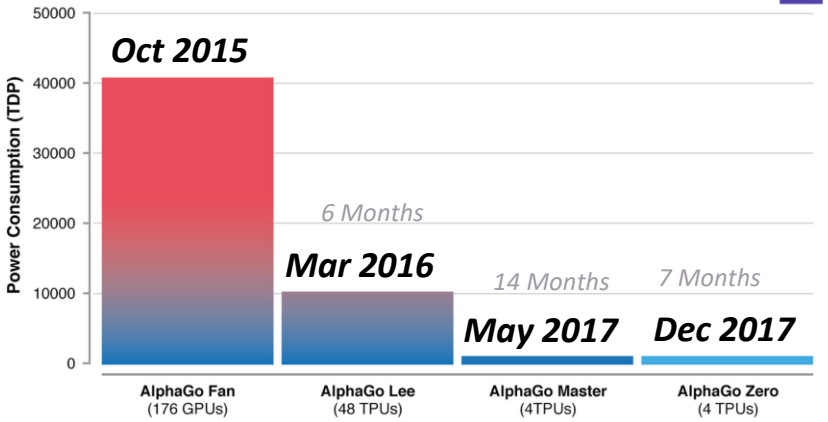
Emerging Trends & Concepts in AI

Algorithmic Agility

AlphaGo

- **October 2015: AlphaGo Fan** defeated the European champion Fan Hui.
- **March 2016: AlphaGo Lee** defeated the World's Top Go player Lee Sedol – who had won the World Championship 18 times.
- **May 2017: AlphaGo Master** participated in the Future of Go summit. It won 60 straight online games, shut out Ke Jie in a three-game match, and beat a human team with five of the world's top Go professionals
- **October 2017:** After just three days of reinforcement learning (i.e. the computer only playing games against itself), **AlphaGo Zero** emphatically defeated AlphaGo Lee by 100 games to 0.
- **December 2017:** After only 40 days of self-play training, **AlphaGo Zero** became even stronger, outperforming AlphaGo Master, which has defeated the world's best players and world number one Ke Jie.





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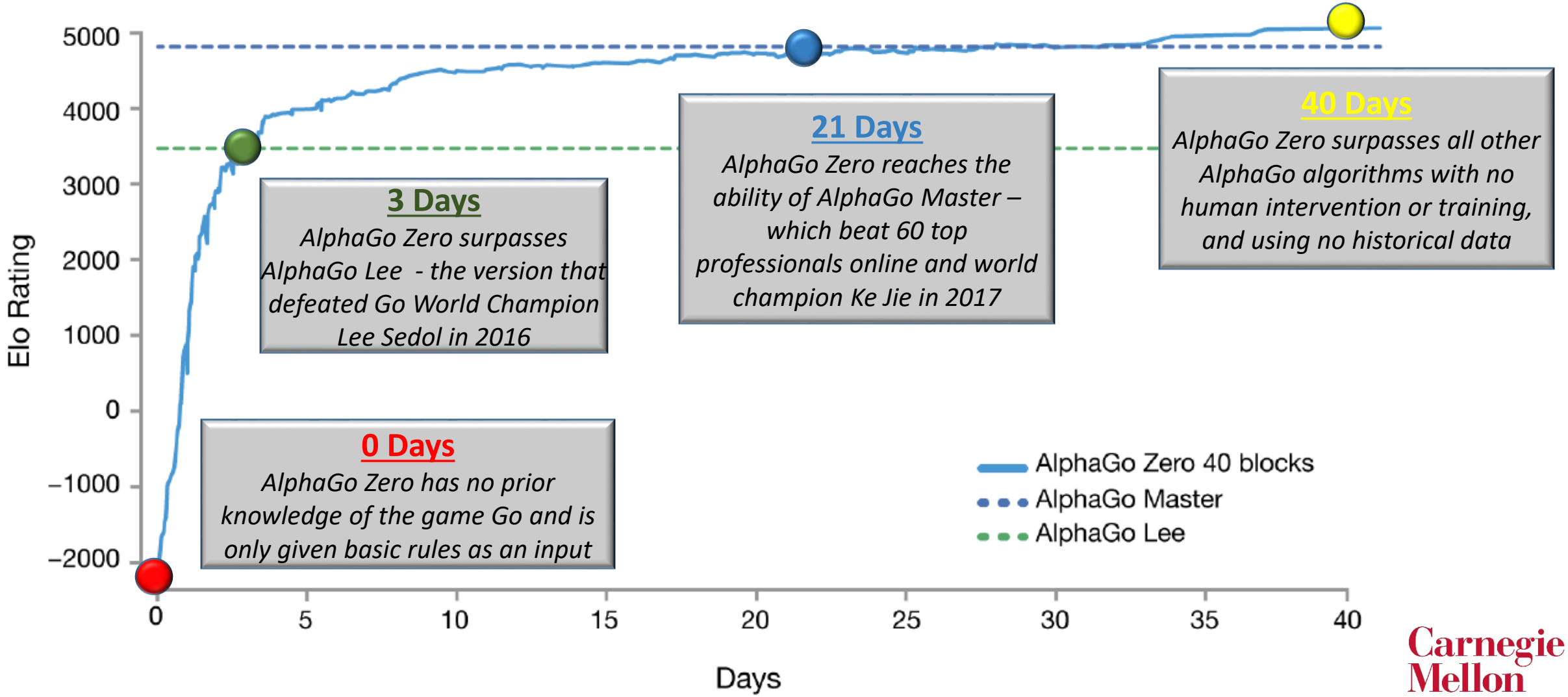

Source: deepmind,.com; TechTalks

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Emerging Trends & Concepts in AI

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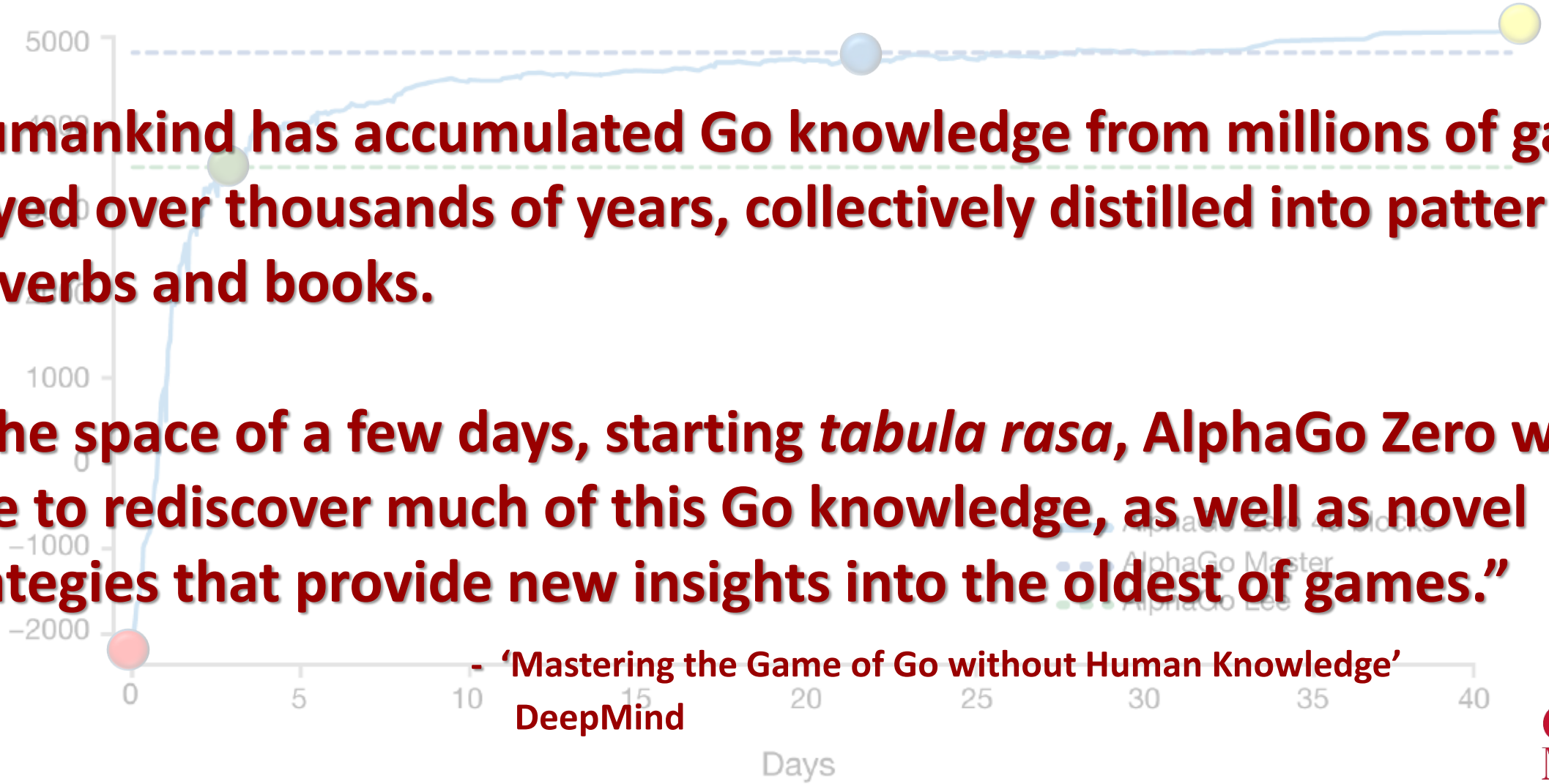

"Humankind has accumulated Go knowledge from millions of games played over thousands of years, collectively distilled into patterns, proverbs and books.

In the space of a few days, starting *tabula rasa*, AlphaGo Zero was able to rediscover much of this Go knowledge, as well as novel strategies that provide new insights into the oldest of games."

- 'Mastering the Game of Go without Human Knowledge' DeepMind

Source: deepmind,.com; TechTalks

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Thank You!

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