Opportunities & Responsibilities

Big Models

A foundation model is any model that is trained on board data at scale and can be adapted (e.g. fine-tuned) to a wide range of downstream tasks; current examples include BERT (2019), GPT-3 (2020), and CLIP (2021)

- input: arbitrary inputs
- output: generate unpredictable (frequently useful) outputs

Capabilities

Issues funhouse mirror

✓ harmful biases

✓ inappropriate responses

✓ dangerous responses

✓ potential for misuse and abuse

✓ difficult to interpret

✓ capability emergence via scale-up development — useful traits emerge during training and need to be discovered post-training.

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28 May, 2020 GPT-3 OpenAI

26 April, 2021 Pan Gu Huawei

11 August 2021 Jurassic-1-Tumbo AI21 Labs

breakthrough
- notable to people in the field
- economically useful and subsequently integrated into business

- Expensive
- Babysitting
- Time

Leverage : information is power

Reduce asymmetries
- Power
- information

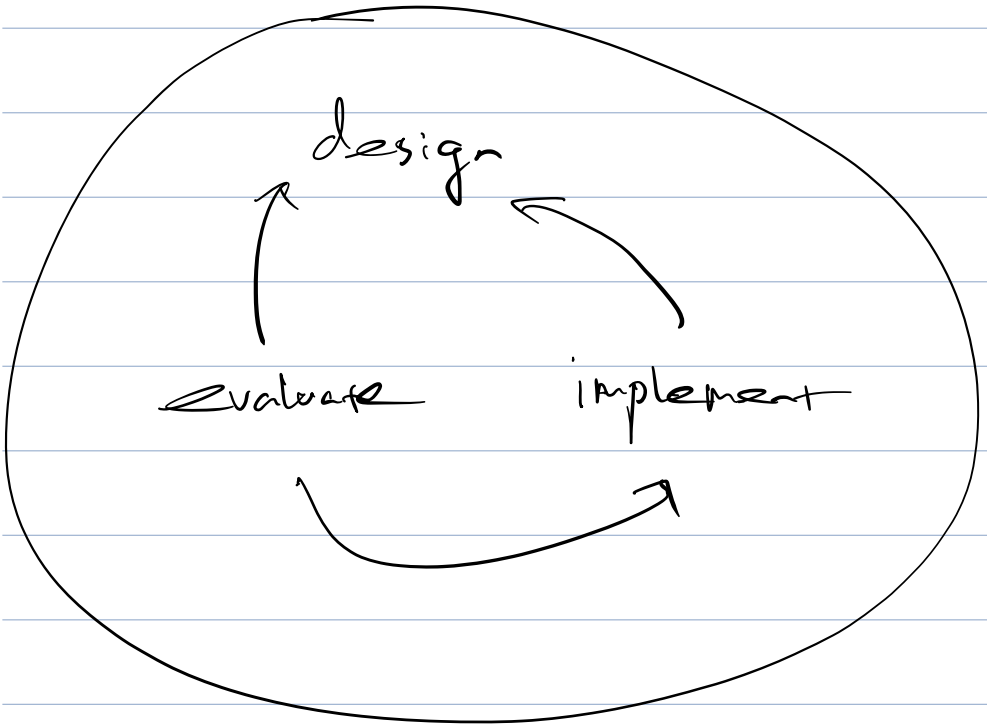
Threshold Effect

Threshold / Ceiling Diagram

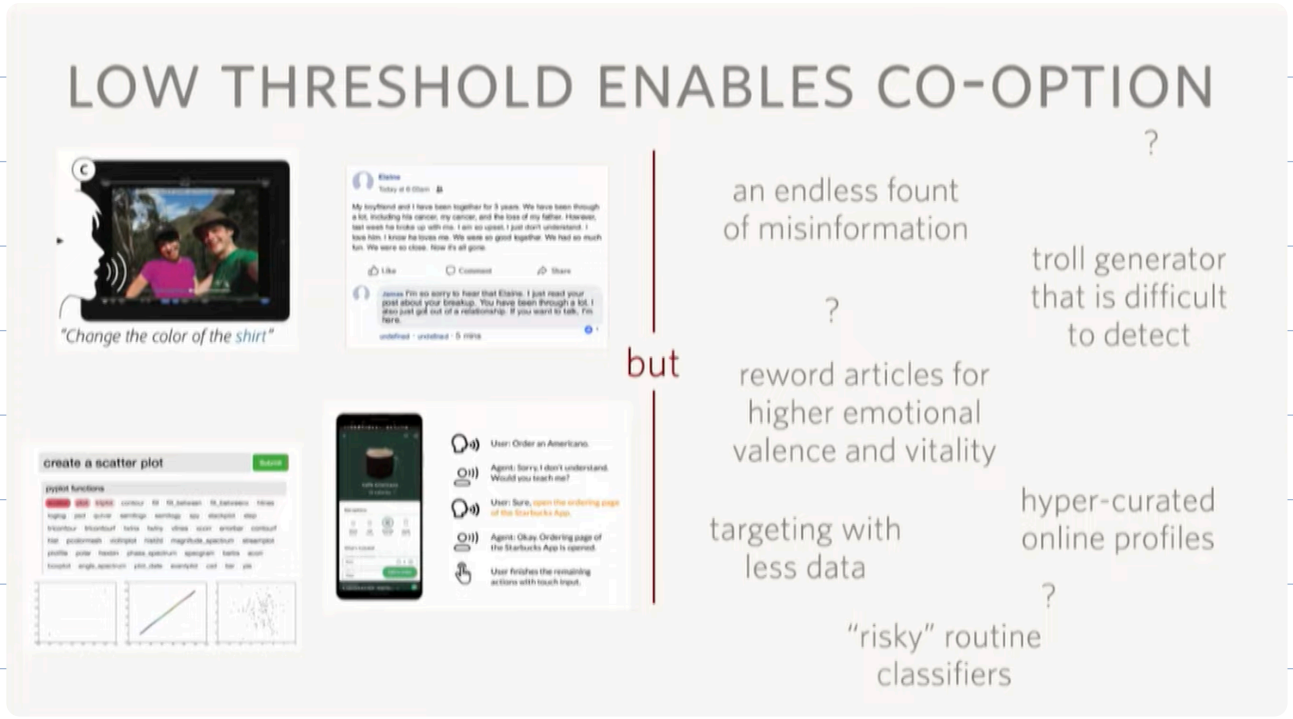
difficulty of use

↑ Lower

↓
- ✓ Massive increases in adoption of medium
- ✓ Wide proliferation of use cases



Ceiling: Sophistication of what can be created



Foundation Models for Laws

Labels are very expensive!

foundation models → ✓ boost performation

✓ domain pretraining

✓ domain-specific FM performs best