



Artificial Intelligence & Ethics, an introduction

ASIFMA 2021 Training Series, Topic 3: AI and Big Data

#PositiveImpact

Boon-Hiong Chan
23 March 2021

AI advances are impressive



Emotion Recognition



Credit: screen shots from <https://smilegate.ai/en/2020/07/29/virtual-human-saya-project/>; <https://www.youtube.com/watch?v=H0F1W-2sD4Y>

Language Model

Pérez and his friends were astonished to see the unicorn herd. These creatures could be seen from the air without having to move too much to see them – they were so close they could touch their horns.

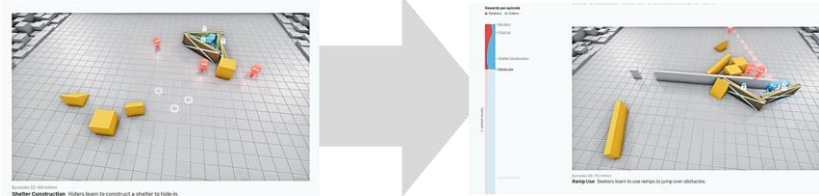
While examining these bizarre creatures the scientists discovered that the creatures also spoke some fairly regular English. Pérez stated, “We can see, for example, that they have a common ‘language,’ something like a dialect or dialectic.”

Dr. Pérez believes that the unicorns may have originated in Argentina, where the animals were believed to be descendants of a lost race of people who lived there before the arrival of humans in those parts of South America.

While their origins are still unclear, some believe that perhaps the creatures were created when a human and a unicorn met each other in a time before human civilization. According to Pérez, “In South America, such incidents seem to be quite common.”

Credit: screen shots from <https://openai.com/blog/better-language-models/>

Autonomous Agents



Credit: screen shots from <https://openai.com/blog/emergent-tool-use/>

Many other progress and examples

Clear benefits to society, industry and economy; concerns too



Benefits

- National strategic priorities
- Adoption of AI by industries
 - In the financial services industry: RPA, “predictive” ops risks management tools, “chatbots”, etc
- Part of organizational and product competitiveness
- A key focus in the financial industry

Concerns

- Privacy and surveillance
- Behaviour manipulation
- Bias and discrimination in machine-based decisions
- Employment

Focus in the financial industry



- Promote safe adoption in the financial industry; e.g. Bank of England's Artificial Intelligence Public-Private Forum of 21 AI experts globally.
- Focus on Data, Model (algorithms), Governance
- Focus on ethical uses
 - Transparency
 - Explainability
 - Accountability
 - Human-in-the-loop

Algorithm + Data = Model

Examples

EU Ethics Guidelines for Trustworthy AI

7 key requirements

MAS Principles to Promote Fairness, Ethics, Accountability and Transparency (FEAT) in the use of AI and data analytics

AI and Ethics is about risks management, practical controls and governance necessary for growth and competitiveness



- Context / area
 - Applications of AI
- Materiality
 - Degree of impact
- Blind spots
 - Data and algorithm's blind spots
- Training and development
 - Education and continuous training e.g. front line to operations
- Governance structure
 - Can includes confidentiality, cybersecurity considerations, structured ways to engage vendors and stakeholders, contractual clauses, reiterative processes to strike balances

Disclaimer



This presentation is for information and discussion purposes only.

This presentation and the general description of the services are in their nature only illustrative, do neither explicitly nor implicitly make an offer and therefore do not contain or cannot result in any contractual or non-contractual obligation or liability of Deutsche Bank AG, any of its branches or affiliates. The information contained in this document is based on material we believe to be reliable; however, we do not represent that it is accurate, current, complete, or error free. Any opinions expressed herein may differ from the opinions expressed by other DB departments. Without limitation, this document does not constitute a DB's view, an offer, an invitation to offer or a recommendation to enter into any transaction. DB is not acting as your financial advisor or in any other fiduciary capacity with respect to this document. DB SPECIFICALLY DISCLAIMS ALL LIABILITY FOR ANY DIRECT INDIRECT, CONSEQUENTIAL OR OTHER LOSSES OR DAMAGES INCLUDING LOSS OF PROFITS INCURRED BY YOU OR ANY THIRD PARTY THAT MAY ARISE FROM ANY RELIANCE ON THIS DOCUMENT FOR THE RELIABILITY, ACCURACY, COMPLETENESS OR TIMELINESS THEREFORE.

Deutsche Bank AG is authorised under German Banking Law (competent authorities: European Central Bank and German Federal Financial Supervisory Authority (BaFin)) and, in the United Kingdom, by the Prudential Regulation Authority. It is subject to supervision by the European Central Bank and the BaFin, and to limited supervision in the United Kingdom by the Prudential Regulation Authority and the Financial Conduct Authority.

Details about the extent of our authorisation and supervision by these authorities are available on request.

Copyright© (March 2021) Deutsche Bank AG.
All rights reserved.