Responsible AI

Introduction

Artificial intelligence (AI) and machine learning are already reshaping the way we do business and, in the society, at large. For example, Robots through AI are able work autonomously and performing regular, high-volume tasks reliably and without been tired.[1] Due to the extraordinary computer power and huge information, AI can analyse more and deeper data using neural networks that have many hidden layers.[1] For example building a scams detection system with five hidden layers was practically impossible few years if not of the available and affordable computing power.

Although we have witness the benefits of AI in recent years in Industries such as Healthcare, Education, Government, there are instances that AI has failed such as legal and ethical issues. There are still no well-established guidelines and frameworks that can limit and prevent biases in the inputting dataset and code that governs the AI algorithms.

An example is the infamous - Microsoft's chatbot "Tay" which interfere with a computer programme used by US courts in evaluating repeat offense of defendants, rating black defendants as highly likely to commit the crime compared to their white counterparts [3]. Such discrimination if allowed to persist, can have adverse implications on public trust in AI techniques in relation to race, religion, gender and other factors will not have adverse effects on how a software ranks an individual's credit quality, insurance premiums or similar issues?

According to [2], that's not to make light of AI's potential impact on our future. In a recent survey, more than 72% of Americans expressed worry about a future in which machines perform many human jobs. Despite these legitimate concerns, we are a long way from living in Westworld. As a result of these negative effects of AI use, there is the need to have good practices that ensures the use of AI addresses issues such as trustworthy, ethical and legal. If AI is unregulated, mistakes and negative effects are likely to happen.
The General Data Protection Regulation was established in May 2018 by the European Union to impose obligations onto organizations anywhere, so long as they target or collect data related to people in the EU. The GDPR imposes heavy fines against those who violate privacy and security standards of the regulation.[7] GDPR addresses the use of data in relation to the following:

- Data protection
- Accountability
- Data Security
- Consent
- People's Privacy Rights

Responsible AI is the practice of designing, developing, and deploying AI with good intention to empower employees and businesses, and fairly impact customers and society—allowing companies to engender trust and scale AI with confidence.[4]
Microsoft has initiated responsible AI tools under one pane of glass to assist AI developers with the debugging of their AI models and responsible decision making. Microsoft is committed to the advancement of AI driven by ethical principle that put people first and making sure that any AI application designed to address the following issues:[5]

- Fairness
- Reliability & Safety
- Privacy & Security
- Inclusiveness
- Transparency
- Accountability

According to Google the development of AI is creating new opportunities to improve the lives of people around the world, from business to healthcare to education and is also raising new questions about the best way to build fairness, interpretability, privacy, and security into these systems.
Google is also committed to ensuring best practices when it comes to Responsible AI and suggest ways of developing responsible AI is through sharing of knowledge, research, tools, datasets and other research from the community at large. Google recommends building responsible AI that are designed by addressing:[6]

- Use a human-centered design approach
- Identify multiple metrics to assess training and monitoring
- When possible, directly examine your raw data
- Understand the limitations of your dataset and model

- Test, Test, Test
- Continue to monitor and update the system after deployment

In conclusion, GDPR coupled with Organisation's commitment to responsible AI can address some of the issues in adopting AI based technologies.

References

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