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The Ethics of Code:
Developing AI for Business with Five Core Principles

Most entrepreneurs and business builders have experienced the pain of admin taking up time that should be spent growing their businesses. At Sage, we are using AI to enable our mission to make admin invisible by 2020, so our customers can spend more time doing what they love. However, we believe AI for business should be ethical and responsible. Here are our five guiding principles when it comes to developing AI for business users:

Core Principles

1

AI should reflect the diversity of the users it serves.

We need to create innately diverse AI. As an industry and tech community we must develop effective mechanisms to filter our bias as well as any negative sentiment in the data that AI learns from and ensuring AI does not perpetuate stereotypes.

Unless we build AI using diverse teams, data sets and design, we are at risk of repeating the inequality of previous revolutions.

2

AI must be held to account—and so must users

We have learnt that users build a relationship with AI and start to trust it after just a few meaningful interactions. With trust, comes responsibility. AI needs to be held accountable for its actions and decisions, just like humans.

Technology should not be allowed to become too clever to be accountable. We don't accept this kind of behaviour from other 'expert' professions, so why should technology be the exception.

3

Reward AI for 'showing its workings'

Any AI system learning from bad examples could end up becoming socially inappropriate—we have to remember that most AI today has no cognition of what it is saying. Only broad listening and learning from diverse data sets will solve for this.

One of the approaches is to develop a reward mechanism when training AI. Reinforcement learning measures should be built not just based on what AI and robots do to achieve an outcome, but also on how AI and robots align with human values to accomplish that particular result.

4

AI should level the playing field

AI provides new opportunities to democratize access to technology, especially because of its ability to scale. Voice technology and social robots provide newly accessible solutions, specifically to people disadvantaged by sight problems, dyslexia, and limited mobility.

Our business technology community needs to accelerate the development of these technologies to level the playing field and broaden the talent pool we have available to us both in the accounting and technology professions.

5

AI will replace, but it must also create

The best use case for AI is automation—customer support, workflows, and rules-based processes are the perfect scenarios where AI comes into its own. AI learns faster than humans and is very good at repetitive, mundane tasks, and in the long term, is cheaper than humans.

There will be new opportunities created by the robotification of tasks, and we need to train humans for these prospects—allowing people to focus on what they are good at, building relationships, and caring for customers. Never forgetting the need for human empathy in core professions like law enforcement, nursing, caring, and complex decision-making.

Background

At Sage, we serve 3 million customers who spend countless hours a week on admin. Most entrepreneurs and business builders have experienced the ache of tax or the pain of admin—taking up time that should be spent creatively. At Sage, we are on a mission to make admin invisible by 2020, so our customers can all spend their time doing what they love.

We started our machine learning and artificial intelligence (AI) journey, by building smart machines that are specifically designed to support our mission. And we quickly learnt that when AI works right, it's a magical first moment for the user.

We launched our first AI product to market in 2016, which now has over 20 thousand worldwide users. Pegg is the world's first accounting chatbot—working as a personal assistant, it intelligently makes managing business finances as easy as texting a friend.

Building AI to fit a use case for business is the easy part, but the other wider questions that the rising tide of AI brings are broad and currently very topical.

We developed our AI with the 'Developing AI for Business with Five Core Principles' in mind, and learnt an enormous amount.

Artificial intelligence is poised to revolutionize our lives, and as a leader in this space we believe that other businesses should bear these in mind when developing or deploying artificial intelligence.

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