

Chancellor's Budget a step in the right direction – but there are (big) gaps

Last month's eagerly awaited Budget delivered by Chancellor Jeremy Hunt had many welcome announcements and commitments from a slight improvement in R&D tax credits to additional funding for quantum computing and AI. It was particularly positive to see a big focus on getting 'Britain back to work', with a £2B investment committed to provide support for disabled people (at a time when nearly 1 in 5 working adults in the UK report having a disability) and £70M set aside to get the over-50s back into employment.

Temps de lecture : minute

6 April 2023

These announcements have the potential to unlock huge economic and social value – but there are some serious things to address first if we are to reap the benefits.

It is no secret that over the years technology has consistently excluded marginalised groups and perpetuated the biases that exist in society. If we accept that people are becoming more reliant than ever on technology to do their jobs, but technology only understands certain voices, then the issue of bolstering the workforce with a diverse group of people becomes clear. While economically savvy, the Government's well intentioned commitments will fail unless we address – and more importantly – significantly improve how inclusive technology is.

One of the fundamental bedrocks of inclusivity is accuracy and this is

exemplified by the speech-to-text industry - a market forecast to be worth nearly \$45B by 2032. Speech recognition technology is already used across a range of core services from banking to healthcare and the need for it is increasing so fast that it will soon become the main interface for all technology. It is also an application worth noting in the context of bringing the over 50s back to work, as more than 40% of people in that age group have hearing loss or are hard of hearing. This makes the need for accurate transcriptions even more important, particularly in settings where there is significant background noise like in call centres, for example. It is an area where Big Tech are falling short. Our own research and testing found that Google was bottom of the pack when it comes to understanding those over 60, producing almost 20% more errors than the under 60 population - a deeply concerning finding when over a billion people worldwide use Google's products and services.

If people are not understood at work by everyday technology and we allow Big Tech to continue to innovate around marginalised communities, are we really creating an economically viable and competitive workforce? We know the answer, but what's the solution? I'd argue that it might lie somewhere between effective regulation and innovative scale-ups who are giving Big Tech a run for their money.

The problem stems from the data

AI or machine learning (ML) technologies today are really good at identifying patterns present in the data. The problem is that these algorithms often identify any pattern in the data, including societal and historical biases. For these reasons, the datasets used to train these models are often the heart of the problem. Diversity and adequate representations of historically marginalised groups in the data is essential for developing inclusive technologies that work for everyone. This is by no means an easy feat. In speech-to-text, for example, one interesting approach is to exploit self-supervised learning (SSL) techniques to reach a

wider range of voices. By learning patterns from large amounts of unlabeled multilingual data, SSL allows one to understand a wide spectrum of voices by learning fine-grained representations of acoustic features.

Looking ahead

Against the backdrop of a tricky and competitive economic climate, the Government is rightly focused on unlocking value from previously overlooked groups. However, it needs to work together with the UK's thriving tech community to ensure its good intentions are delivered on. Policies, commitments and surface-level actions risk having an underwhelming impact unless the technologies that power our professional lives are truly inclusive.

Benedetta Cevoli, Senior Data Scientist, at Speechmatics.

Article by Benedetta Cevoli