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■ Oct. 11, 2018

5G operations
Deutsche Telekom will launch commercial 5G operations in Germany in 2020, as long as enough commercial devices are available, said the firm's chief executive, Tim Hoettges, on Wednesday.

IRAN DAILY »» Science & Technology

Amazon scraps secret AI recruiting tool that showed bias against women

Amazon.com Inc.'s (AMZN.O) machine-learning specialists uncovered a big problem: Their new recruiting engine did not like women.

The team had been building computer programs since 2014 to review job applicants' re-

Brochures are available for potential job applicants at 'Amazon Jobs Day', a job fair at the amazon.com Fulfillment Center in Fall River, Massachusetts, the US, August 2, 2017.

sumes with the aim of mechanizing the search for top talent, five people familiar with the effort told Reuters.

Automation has been key to Amazon's e-commerce dominance, be it inside warehouses or driving pricing decisions. The company's experimental hiring tool used artificial intelligence to give job candidates scores ranging from one to five stars — much like shoppers rate products on Amazon, some of the people said.

"Everyone wanted this holy grail," one of the people said.

"They literally wanted it to be an engine where I'm going to give you 100 resumes, it will spit out the top five, and we'll hire those."

But by 2015, the company realized its new system was not rating candidates for software developer jobs and other technical posts in a gender-neutral way.

That is because Amazon's computer models were trained to vet applicants by observing patterns in resumes submitted to the company over a 10-year period. Most came from men, a reflection of male dominance across the tech industry.

In effect, Amazon's system taught itself that male candidates were preferable. It penalized resumes that included the word 'women's', as in 'women's chess club captain'. And it downgraded graduates of two all-women's colleges, according to people familiar with the matter. They did not specify the names of the schools.

Amazon edited the programs to make them neutral to these particular terms. But that was no guarantee that the machines would not devise other ways of sorting candidates that could prove discriminatory, the people said.

The Seattle company ultimately disbanded the team by the start of last year because executives lost hope for the project, according to the people, who spoke on condition of anonymity. Amazon's recruiters looked at the recommendations generated by the tool when searching for new hires, but never relied solely on those rankings, they said.

Amazon declined to comment on the recruiting engine or its challenges, but the company says it is committed to workplace diversity and equality.

The company's experiment, which Reuters is first to report, offers a case study in the limitations of machine learning. It also serves as a lesson to the growing list of large companies including Hilton Worldwide Holdings Inc. and Goldman Sachs Group Inc. that are looking to automate portions of the hiring process.

Some 55 percent of US human resources managers said artificial intelligence, or AI, would be a regular part of their work within the next five years, according to a 2017 survey by talent software firm CareerBuilder.

Employers have long dreamed of harnessing technology to widen the hiring net and reduce reliance on subjective opinions of human recruiters. But computer scientists, such as Nihar Shah, who teaches machine learning at Carnegie Mellon University, said there is still much work to do.

"How to ensure that the algorithm is fair, how to make sure the algorithm is really interpretable and explainable — that's still quite far off," he said.

Masculine language

Amazon's experiment began at a pivotal moment for the world's largest online retailer. Machine learning was gaining traction in the technology world, thanks to a surge in low-cost computing power.

And Amazon's Human Resources department was about to embark on a hiring spree: Since June 2015, the company's global

headcount has more than tripled to 575,700 workers, regulatory filings showed.

So it set up a team in Amazon's Edinburgh engineering hub that grew to around a dozen people. Their goal was to develop AI that could rapidly crawl the web and spot candidates worth recruiting, the people familiar with the matter said.

The group created 500 computer models focused on specific job functions and locations. They taught each to recognize some 50,000 terms that showed up on past candidates' resumes.

The algorithms learned to assign little significance to skills that were common across IT applicants, such as the ability to write various computer codes, the people said.

Instead, the technology favored candidates who described themselves using verbs more commonly found on male engineers' resumes, such as 'executed' and 'captured', one person said.

Gender bias was not the only issue. Problems with the data that underpinned the models' judgments meant that unqualified candidates were often recommended for all manner of jobs, the people said. With the technology returning results almost at random, Amazon shut down the project, they said.

The problem, or the cure?

Other companies are forging ahead, underscoring the eagerness of employers to harness AI for hiring.

Kevin Parker, the chief executive of Hire-Vue, a startup near Salt Lake City, said automation is helping firms look beyond the same recruiting networks upon which they have long relied. His firm analyzes candidates' speech and facial expressions in video interviews to reduce reliance on resumes.

"You weren't going back to the same old places; you weren't going back to just Ivy League schools," Parker said.

His company's customers include Unilever PLC and Hilton.

Goldman Sachs has created its own resume analysis tool that tries to match candidates with the division where they would be the 'best fit', the company said.

Microsoft Corp.'s LinkedIn, the world's largest professional network, has gone further. It offers employers algorithmic rankings of candidates based on their fit for job postings on its site.

Still, John Jersin, the vice president of LinkedIn Talent Solutions, said the service is not a replacement for traditional recruiters.

"I certainly would not trust any AI system today to make a hiring decision on its own," he said.

"The technology is just not ready yet."

Some activists say they are concerned about transparency in AI. The American Civil Liberties Union is currently challenging a law that allows criminal prosecution of researchers and journalists who test hiring websites' algorithms for discrimination.

"We are increasingly focusing on algorithmic fairness as an issue," said Rachel Goodman, a staff attorney with the Racial Justice Program at the ACLU.

Still, Goodman and other critics of AI acknowledged it could be exceedingly difficult to sue an employer over automated hiring: Job candidates might never know it was being used.

As for Amazon, the company managed to salvage some of what it learned from its failed AI experiment. It now uses a 'much-watered down version' of the recruiting engine to help with some rudimentary chores, including culling duplicate candidate profiles from databases, one of the people familiar with the project said.

Another said a new team in Edinburgh has been formed to give automated employment screening another try, this time with a focus on diversity.

Head: 350 research projects implemented in 18 months in Iran's NBML

Science Desk

Close to 350 research projects was carried out in Iran's National Brain Mapping Lab (NBML) during March 21, 2017-September 22, 2018, said the NBML head on Wednesday.

More than 1,000 researchers took part in the researches, said Mohammadreza Ai at the opening ceremony of the Second Iranian Symposium on Brain Mapping Updates (ISBM 2018) in Tehran, IRNA reported.

He noted that of the total number of the projects, 200 pertained to the year to March 2018, adding the NMBL's equipment were at the disposal of and used by those involved in conducting these researches for 4,600 hours.

Ai added since March 21, 2017, more than 4,000 researchers have visited the laboratory and more than 250 workshops have been held in it either attended or conducted by leading foreign researches.

Commenting on the ISBM 2018, which is to end today, he said top international researchers will present modern techniques and research findings in the fields of brain mapping in this scientific event.

Ai added some 20 speeches will be delivered in ISBM 2018, of which six will be given by foreign academics.

He said 45 articles are also to be presented at the event.

He put the number of participants and attendees in the previous edition of the symposium at 350, adding that over 550 participants attended the present edi-

tion of the event, showing that the ISBM is gaining more popularity among researchers.

NBML's head added 25 workshops will also be held on the sidelines of the scientific event to increase Iranian researchers' knowledge of modern brain mapping methods and techniques.

He said among the other auxil-

iary programs of the event is organizing a festival on brain mapping research and technology in which 10 new technology-based firms (NTBF) will put their products on display.

Ai said among the NMBL's missions is to support NTBF, adding promoting research is yet another assignment of the lab.

Minister: Scientific cooperation with Japan to help present Iran's capacities

Science Desk

Implementing joint scientific projects with Japan will encourage both Iran and Japan to cooperate further and help the former present its scientific potentials and capabilities to the world, said Iran's minister of science, research and technology.

Expanding cooperation between the two states in the academic field will also help assuage other countries' political concerns, added Mansour Gholami in an address to Iranian students in the Japanese capital of Tokyo on Wednesday, IRNA reported.

The minister, who was in Japan for attending the 15th Annual Meeting of the Science and Technology in Society Forum in Kyoto held from October 7-9, described the institutionalization of cooperation between Iran and international research centers as very important since they help transfer experiences to the country.

Gholami said the main mission of the Iran's Ministry of Science, Research and Technology is to create strong links with other countries' elites irrespective of political issues.

Elaborating on the practical function of Iranian universities and efforts to organize them, he underlined their priority to engage in more international scientific and academic collaborations.

Huawei to sell servers with own chips in cloud computing push

China's Huawei, the world's largest telecom-equipment maker, on Wednesday said it will sell some servers powered by its own chips for the first time, doubling down on efforts to boost its cloud computing business.

This comes at a time when Huawei, which set up its cloud business unit last year, is trying to gain a firmer foothold in the public cloud market at home that is currently dominated by Alibaba, Reuters reported.

Huawei's semiconductor arm, Hisilicon, already makes some chips the company uses in its smartphones and telecom equipment, but the servers it currently sells to telecom companies and cloud computing clients mostly use Intel chips.

Huawei did not say what percentage of the servers it makes will use its chips.

Its seven nanometer Ascend 910 chipset,
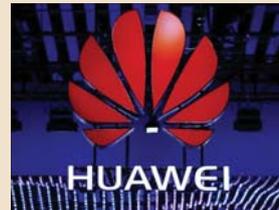
The Huawei logo is seen during the Mobile World Congress in Barcelona, Spain, on February 26, 2018.

which the firm claims is twice as powerful as its nearest competitor Nvidia's v100, will be avail-

able from the second quarter of 2019.

Huawei will not sell these chips to third parties, its rotating chairman, Eric Xu, said at the company's annual global partners' conference, Huawei Connect.

"Since we do not sell to third parties, there is no direct competition between Huawei and chip vendors," Xu said on Wednesday, in response to questions about competition from companies such as Qualcomm, AMD and Nvidia.

"We provide hardware and cloud computing service."

Huawei also unveiled Ascend 310, a chipset for computing on smart devices, which is available right away.

Huawei has been trying to boost its profile in the cloud computing market and has teamed up with Microsoft to offer Microsoft apps on Huawei Cloud.