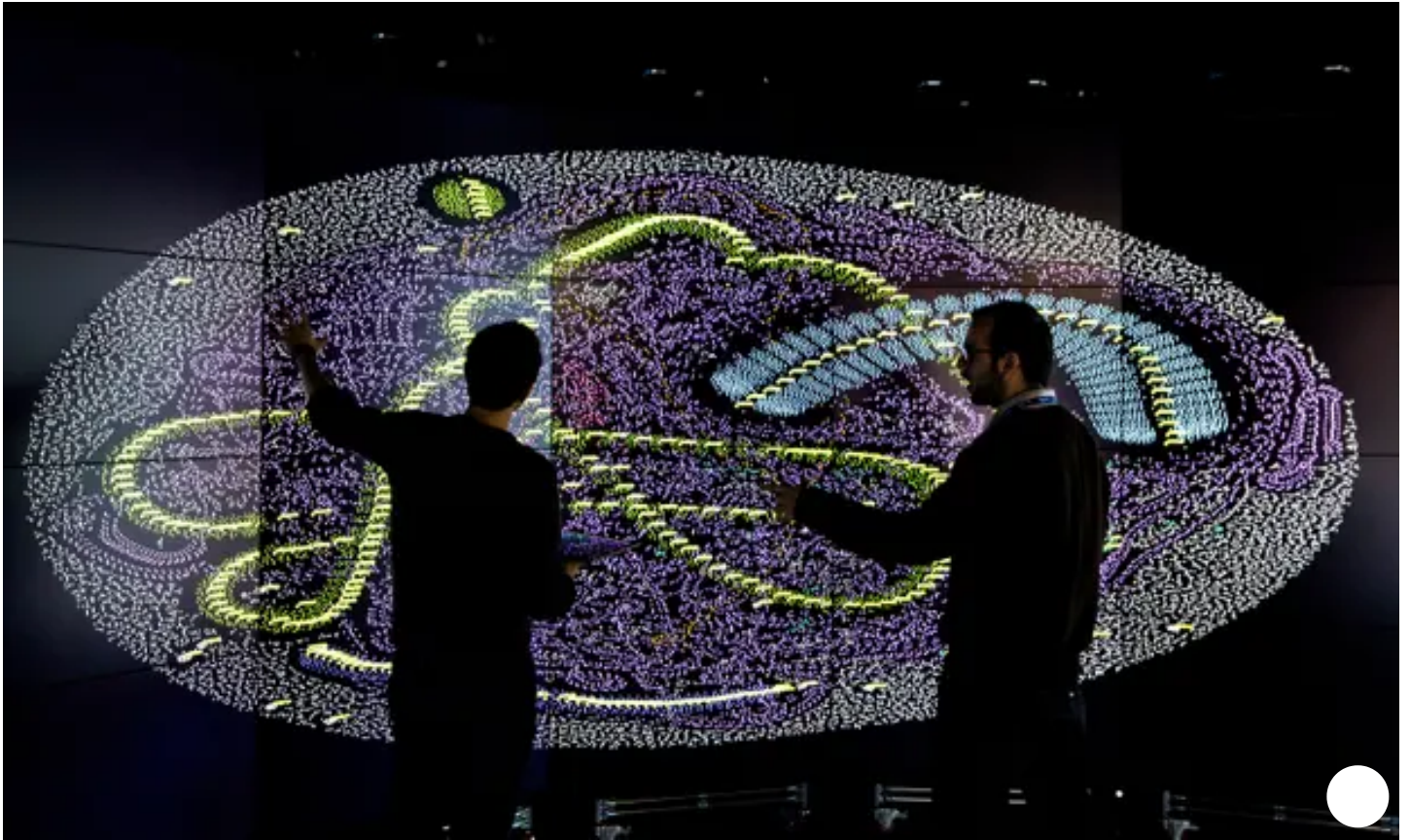# The Guardian

Scientists plan huge European AI hub to compete with US

Exclusive: In an open letter, the scientists say the proposed Ellis institute is essential to avoid brain drain to big tech firms

Ian Sample *Science editor*

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Leading scientists have drawn up plans for a vast multinational European institute devoted to world-class artificial intelligence (AI) research in a desperate bid to nurture and retain top talent in Europe.

The new institute would be set up for similar reasons as Cern, the particle physics lab near Geneva, which was created after the second world war to rebuild European physics and reverse the brain drain of the brightest and best scientists to the US.

Named the European Lab for Learning and Intelligent Systems, or Ellis, the proposed AI institute would have major centres in a handful of countries, the UK included, with each employing hundreds of computer engineers, mathematicians and other scientists with the express aim of keeping Europe at the forefront of AI research.

In an open letter that urges governments to act, the scientists describe how Europe has not kept up with the US and China, where the vast majority of leading AI firms and universities are based. The letter adds that while a few "research hotspots" still exist in Europe, "virtually all

of the top people in those places are continuously being pursued for recruitment by US companies."

The extent of the hiring frenzy and the damaging impact it is having on British universities was revealed in a Guardian investigation last year. It found that PhD students had left their studies for six-figure salaries at US tech firms. Meanwhile, some universities had been hit so hard that they had lost an entire generation of talented young researchers.

The letter, signed by scientists in the UK, France, Germany, Switzerland, Israel and the Netherlands, calls for work on the new institute to start this year. Under the proposal, participating countries would fund the institute as an intergovernmental organisation. The same approach is used to fund the European Molecular Biology Lab, which has a major centre in Cambridge.

"Something needs to be done and it needs to be done now," said Zoubin Ghahramani, professor of information engineering at Cambridge University and chief scientist at Uber. "It would provide Europe with centres of mass where we would have not 10 researchers but hundreds with expertise from different countries."

Ghahramani, one of the most influential AI researchers in Britain, joined Uber after the San Francisco-based firm bought Geometric Intelligence, an AI startup he co-founded with a New York University psychologist some years ago. Despite the move, which exemplifies the problems Europe now faces, he has driven the UK's involvement in the proposal for the new lab.

"This is of such importance to Europe it would be a terrible mistake not to do something major," he said. "If we don't act in this area, both European universities and European industry will start to drift downwards."

The institute's stated mission is to ensure that the best AI research is performed in Europe, a goal that would drive jobs and economies and also give the region's scientists a voice in shaping how AI changes the world, the scientists believe. Those who work at the institute would have the freedom to work with industry and launch startup companies based on the breakthroughs they make.

Private and public investment in AI have soared on the back of breakthroughs in the field over the past few decades, but the US and China have firmly taken the lead. The technology has such potential that its impact on society is widely expected to be as profound as the industrial revolution.

The first steps in building the institute are expected to begin with a collaboration between France and Germany with other nations joining later. Ultimately, each local lab would become a $100m facility with an annual budget of $30m.

The potential for AI to have a dramatic impact on lives, by taking decisions in areas from healthcare and policing to defence and transport, has led to serious questions over who writes the rules on how AI is used.

If Europe steps back and watches AI research from the sidelines, it will have little say in shaping its future, Ghahramani said. "The regulatory environment for technology is often led by the people who control the technology," he said.

Another major supporter of the institute, Bernard Schölkopf, director at the Max Planck Institute for Intelligent Systems in Tübingen, Germany, said: "Europe has a unique academic

research tradition, so we have managed to keep up for a number of years. But the US and China have recognised the strategic importance of this field and no single European country is a match for this."

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