AI: a missionary technology

Dear President, dear attendees, in all your positions. Dear students! It is an honour and great pleasure to be here, today. Especially since this is familiar territory for me: a favourite place.
I once followed part of my studies here in Tilburg, because of my interest in what was then called computerisation or automation. And especially about its consequences for government, bureaucracy and democracy. I studied with Paul Frissen and took lectures from Wim van de Donk - who is now your chairman. That I get to speak on this topic again today - is a privilege.

Innovation and activism

Tilburg University was the first in the Netherlands to offer a degree in information science - back in 1984, well before the internet and a time when a computer at home was still a rarity. A university that already acquired an IBM computer in the early 1960s' that was used by mathematician, world chess champion and Professor of Automatic Information Processing, Max Euwe. In short, for innovation and a fresh perspective, Tilburg is and was the place to be.

So is a healthy dose of activism. Before my studies, 'Tilburg' - then the Catholic University of Applied Sciences - was known as an activist place. I think in particular of 18 February 1969, when above the gate of the main building the words 'Karl Marx University' were suddenly painted. With red paint, of course! I hope that these two facets - innovation and activism - will also be felt and felt in the coming academic year.

Because in the field of digitization, this is much needed: innovation in researching applications of AI in the service of broad prosperity and activism in protecting our public values. Public values that are under pressure in the digital world, especially by the power of Big Tech (big money).
That is what I would like to talk to you about today: about the opportunities and risks of AI - and of generative AI in particular. And what we can - and will - do concretely in this: as a society and as politicians, both in the Netherlands, in Europe and worldwide.

Naturally, I have a strong appeal to you, both scientists and students. Because you are the generation for whom technology is a no brainer. Mobile banking, social media, coding, it goes without saying. And when I talk to students, I also hear that you think it is important that technology works for everyone. That everyone can participate and that the joys and burdens are shared fairly. I'll come back to that later.

'Ordinary' AI

To form a picture of how important that call to you and yours is, let me first explain why we need to have this. And for that, I'll start with a technology that is now everywhere: artificial intelligence, or AI. Chat robots and personalised music suggestions on Spotify can make everyday life a little easier. There are also computers that can use algorithms to examine human tissue to detect lung cancer or birth defects. Or an algorithm that can detect diseases in a head of lettuce in the ground, before they spread.

These are highly desirable - and often downright promising - examples. But there is also another side of the coin. This is because 'ordinary' AI - that's what I'll call it for the sake of convenience - also carries huge risks. Risks that I myself came face to face with, in a way that deeply affected me: when I spoke to parents who were victims of the benefits affair. They had been 'singled out' on the basis of an AI control risk model. Without much additional investigation, they had to repay - unjustly - often thousands of euros, causing enormous damage to them and their children. And the loss of trust in a government that was not beside, but opposite them. And think also of disinformation and other harmful content that children, for example, are exposed to; personal data scraped off the internet en masse, making detailed profiles of all of us for sale.

And what about social media addiction, based on highly effective recommendation algorithms. Just last week, the Social and Cultural Planning Office highlighted that Dutch people are concerned about disinformation and misinformation and weigh these concerns against freedom of speech. The foundation of our highest good: democracy.

The use of AI therefore increases inequality, often leads to great harm and violates public values such as privacy, security, transparency and self-determination. This applies to the Netherlands, but also worldwide Problems created on the basis of the deployment of currently almost unregulated AI.
Problems created by the products and services of Big Tech companies-or in terms of the then-catholic college: big business.
We use their products for everything: at home with social media and games at work in all kinds of risk models and especially in digital services by companies and governments. We often cannot get rid of them or away from them.

Regulation
Based on problems with these first generations of algorithms - and their applications - a clear need for regulation has emerged in Europe. Just as drugs, food and cars also need to be tested and approved before they can enter the market. Europe is leading the way in this, and the Netherlands certainly in it, to make and implement these regulations.
Thanks to the AVG, we guard our privacy. And thanks to the Digital Markets Act and the Digital Services Act, there are more rules to limit Big Tech's market power and protect our privacy and counter disinformation. Since 25 August this year, the 19 largest online platforms and search engines must comply with DSA rules. This gives us an opportunity to critically scrutinise platforms in the coming period as well.
As a government, we have an exemplary role in applying all this regulation. Therefore, as a government, we are now - anticipating the european AI regulation - which is at an advanced stage - being as transparent as possible about the algorithms we use, and ensuring that science can look in and do research.
With the algorithm register we developed for the government and with the algorithm watchdog - the Personal Data Authority - the Netherlands is leading the way.
But note: even so, this is far from enough. Much more is needed in government and I will elaborate on that later. But companies developing and applying AI also need to get to work. Many promise to cooperate, but we still see very little of that in practice. You could draw a comparison with the Climate issue. In the 1980s, it was denied by the fossil industry, then trivialised and only decades later, based on based on great work by NGOs and governments, it was turned into hard targets and a climate approach.

We see these patterns in the digital world too. The revenue models of social media platforms, for example, are based on detailed profiles of all of us and recommendation algorithms: you and I are not paying for it, so we have become the product. And when it comes to computer programmes or phones, vendor lock in - tied to the supplier - is the order of the day. Not to mention 'the extra mortgage' we are taking on our climate with the energy use required for AI.

Generative AI
Just as we are getting a better grip on this many-headed monster that is AI, generative AI presents the next big challenge. And let me be very clear: that challenge is infinitely greater, and we need to take action on it at lightning speed and on a grand scale. As far as I am concerned, based on a coordinated approach at the highest level - not just in the EU, G7 or G20, but at the global level, that of the United Nations. A coordinated approach similar to the climate accords. Based on scientific understanding as with climate the IPCC.

You know, generative AI does not just behave like a very smart calculator, to put it far too simplistically. Generative AI not only calculates, but also draws/designs/sketches something new based on that.
It is AI that produces its own 'original' content: from ChatGPT's texts and Dall-E's images to music, video and even code for software. All based on 'large language' models, fed with huge amounts of data - public and otherwise.
It produces exciting products. There is already a modest market for digital works of art that do not involve a human being. And a recent example that incredibly captured my imagination is a new system from the University of California. That is capable of literally extracting words from a patient's brain using 250 electrodes and a complex algorithm. - Note: not mind reading.Inspiring, moving and truly incredible, if you

ask me. AI additionally offers us opportunities in terms of productivity gains. Boring, administrative work will soon be a thing of the past for many professions.

Opportunities also for refreshing democracy, making it fairer and more equitable. In which AI comes to a synthesis of all voices, not just those shouting the loudest, so everyone is heard. But it immediately shows the incredible impact of generative AI. Jensen Huang, the CEO of chipmaker Nvidia, called Chat GPT "the 'iPhone moment' of AI. Generative AI shows us content and digital products where humans are less and less involved. And so we are faced with the question: is intelligence still the exclusive domain of humans? What implications - drastic or otherwise - does this technology have for our society. For the way we learn, work, make art, write, etc.? And for the way we interact with each other? And when developments are so rapid, a critical, inquisitive, attitude is indispensable. We have to keep asking the right questions in order to define boundaries too. Questions like who the creators of these models are and with what values, starting points and assumptions they are designed. What effect they have on us and on our society, what they give us and what they take away from us.

The answers to those questions will determine what we as a society and as politicians have to do to manage these developments. Generative AI, according to consultancy firm McKinsey, could bring trillions to our economies, make millions of jobs redundant worldwide, have a decisive impact on education and science, art and war - or even completely redefine those concepts. Generative AI has the potential to radically and unrecognisably, transform countless fields. And I suspect it is going to fulfil that potential. This is not a theoretical vision of the future, from Terminator or The Matrix but something happening right now before our eyes. To master this technology, we don't have the decades that sat between the rise of social media and the DSA. What do we have to do now? How do we guide the opportunities in such a way that we protect our public values even when using generative AI. That we do not give an inch on democracy, privacy, self-determination, transparency and security.
We need to. Take image generators, like Dall-E for example.

What they produce is an average, an amalgam of images from films and advertising, including all the prejudices and stereotypes reflected in them. This leads to a black woman getting a distorted face, or being portrayed by default as a caretaker, or cleaner.
If we want technology to work for everyone, we need to unequivocally qualify such patterns as unacceptable and work on values-driven alternatives. Innovation as an aspiration, but with fundamental rights as hard conditions.

What if we do nothing: Race to recklessness
If we do not address these risks, we will be wilfully subjecting ourselves to a company of about four or five white men, who seem to genuinely think that their billions prove that they know what is good for the world. That you can buy the definition of freedom of speech if your pockets are deep enough. Take that cage fight between Mark Zuckerberg and Elon Musk that has been hyped for months.

Forgive me for not having the latest status handy for a moment. Trained, not trained, going ahead, not going ahead, pay per view, etcetera... It is tempting to see little more in it than a successful joke.

But above all, it is an apt illustration of a very real and also destructive kind of cockiness. The kind of behaviour that leads to a race to recklessness, where tech companies feel compelled to market products that are not yet finished, let alone tested.

With consequent failures.

A live demonstration of an AI chatbot turns out afterwards to be a recorded video. And a Twitter bot is hastily taken offline when it plays off the most insanely explicit monologues within a day or two. Funny, this kind of failure.

Meanwhile, consumers turn out to be guinea pigs; we are part of a social experiment. With very serious consequences. Like the Belgian who recently committed suicide based on recommendations from a chatbot. This, while we do know how many calories are in a bar of chocolate, how much CO_2 a Volkswagen Golf emits, what effect a specific drug can have on our blood pressure - because otherwise, it won't make it to market.

But what happens with generative AI? Who will be presented with what information - and why? Big tech companies are already saying that we all don't understand what they are doing. And that dús we should also leave regulation to them. It takes guts...

And they say they will soon even come up with a 'General AI' or 'Artificial General Intelligence'. In other words, an AI that can do at least the same intellectually as humans. It doesn't seem very likely to me. But it also seems even less desirable to me. Indeed, we may even fear that development.

What do we put in return?

Of course, we as a government have developed the working agenda of values-driven digitalisation. In which it is clearly stated that: Everyone should be able to participate in the digital world. Everyone can trust the digital world, can feel safe. Everyone should have control over their digital lives.

And with an exemplary role for the government. As far as I am concerned in the near future: with a minister for digital affairs steering the course to make the Netherlands a digital leader....

But that, of course, is not the only thing. We will have to face this great development - with the countless opportunities and risks coming our way - together. And so that also requires a lot from education, science and business. At all levels: The Netherlands, Europe and the world.

In a European context, with the AI regulation, for example, in which we play an active role, and also more broadly internationally. Where for our society legislation and policy is 'silver', but supervision is actually 'gold'. So that is what I have been fighting for over the past 1.5 years.

In the Netherlands, but also for instance at tech festival South by Southwest in Austin Texas and at the Asia-Tech conference in Singapore. After all, we all use the same software, the same social media and the same chatbots.

Role of business
Dealing with AI is also about ensuring a fair distribution of joys and burdens. Let's not fall into the historical pattern where progress increases existing differences and barriers. The logistics worker in the warehouse who works up a sweat, can barely make ends meet and has limited access to the toilet. And the owner who takes a tourist space flight in his own rocket, and then thanks the people in the warehouse for making it possible. Following on from this is fair competition.

Startups, including European and Dutch startups, deserve a fair chance. We need to work on values-driven earning power. IT professionals like to screen with the romantic tales of Jobs and Wozniak, who, tinkering in a Californian garage, laid the foundation of the world's largest company. But the reality of the AI revolution is that today's tech giants are squeezing out the Apple's of the future. That is why it is important to also make room for open source technology and for public commons - like Wikipedia. And also for public large language models. To support our and Europe's sovereignty. Digital resources and meeting places accessible to all, based on public values. As a government, we have already taken a step and are now using Mastodon for our communications. And in the country, we financially support so-called pub hubs, a secure and trusted online environment managed by public organisations and their end users.

We are also serious about protecting children's rights in the digital world. In doing so, we are fully committed to increasing knowledge among young people and their parents on the one hand, and on the other to placing limits on the products and services Big Tech is allowed to offer children.
We must continue this line.

Role of Education & Science
This university proudly bears the motto: Understanding society. And that is why I stand here now before you as listeners: for many answers, the government desperately needs science. Here, I endorse the vision

of SURF, the cooperative association of Dutch educational and research institutions in the field of information and communication technology: Invest in research, in the digital foundations of that research and protect the core values of the internet

Pioneering research is also being conducted here in Tilburg, for example on the ethical aspects of AI in a military context, always focusing on the interaction between humans and AI.

Where digitalisation is seen as the new baseplate for society. And people are aware that digitalisation changes people, thus also the research object of social sciences: human society and the behaviour of individuals within that society.

Fortunately, we are also already researching a lot at EU level, for example through the Digital Europe Programme's test and experimentation facilities. And the European Centre for Algorithmic Transparency, or ECAT, recently opened in Seville. ECAT's scientists will work with representatives from academia, industry and civil society to improve understanding of algorithms. What we should be aiming for is an international centre to research, test and regulate AI. And I actually think the Netherlands is the right place to host such a centre. Perhaps specifically in here Tilburg.

But the role of science goes so much further than researching AI. It also includes setting up public large language models. And I understand that Tilburg University is also preparing students for a future with AI. Writing with AI, doing research with AI - it's incredibly important to learn early.

Taming big tech
Last January, the article How the Dutch are taming big tech was published in The New York Times. The Netherlands was designated as a guiding country. A recognition of our commitment to privacy and public values. By conducting in-depth assessments on products and services – such as word processors, social media platforms and headsets for the meta-verse – we determine what happens to data, why certain content is shown, and whether children are adequately protected. If that is not the case, we will enter into discussions with companies and demand improvements. David versus Goliath, it was called.

A comparison that I am not entirely happy with. I don't want to take down or beat Big Tech, I don't really have the ambition to stand in such a cage with those guys. What I do want is to tame big tech. Gain insight into how their products work and align them with our values. Stimulating innovation and regulating it. Just like we do with medicines or food. And that is very applicable to the AI services of big tech. Although we as a Cabinet are now outgoing, I believe that the path we have taken is the right one. And I also hope that this path will continue.

After all, AI is not demissionary. That the attitude we adopt towards big tech, and the methods we already use to regulate products and services, are also the attitude and methods to contain AI. Because we can offer something in response to all those uncertainties, those countless questions and dilemmas. Something that is a lot less changeable and less unpredictable: our fundamental rights and our values. And, not unimportantly, the ability to enforce that products and services comply with this.

Closing call
Dear attendees, let me be honest: I am of course quite proud that a newspaper like the NYT declares us a guide country. But actually that message means that we still have so much work to do! Because we are only at the beginning of our task to use AI mainly to our advantage. And if we slack off now, we will - so to speak - let technology walk all over us. So let us all - students, researchers, administrators, entrepreneurs - adopt an active attitude. Let's embrace new technology, tame it and make it more beautiful! Develop your own language model, create an AI testing facility, where not only technological, but also ethical social issues are taken into account. Conduct research into the consequences and experiment with new applications and regulation of (generative) AI. Let's use AI for the world we want and a planet we want to cherish, instead of a world forced on us by a handful of people.

With a healthy balance between the opportunities of products and the rights and interests of consumers and citizens. And let us use your position and yours to become even more of a guide country and to remain so. Let's strengthen cooperation between your university and the government. Dear students, get the best out of yourself this year. I hope that this year your curiosity, optimism and your activism will be sparked. Teachers and researchers, The government would like to be a reliable and valuable partner for you and help make research possible. With our Dutch scientific culture and our strong urge to discover and research, we

are frontrunners. We are a knowledge economy, a highly digitalized country. The Netherlands has everything it takes to be a thought leader and play a crucial role in shaping the global digital future. Let's remain leaders. Let's get going. As the famous French thinker Voltaire concluded his satirical story Candide: '*il faut cultivate notre jardin*' By which he meant: everyone can work towards a better world in their own environment and gain happiness and satisfaction from it.

So let's do what we can to bring change and improvement to the digital world. Because it is increasingly our garden, our meeting place, our public space And not the playground of a handful of struggling tech billionaires. I wish you all a great academic year, full of opportunities, full of innovation and with a good dose of activism!

 I thank you!