



European Tech Alliance High-Level Principles on Artificial Intelligence

February 2020



Foreword

For EUTA members, artificial intelligence (AI) is critical to innovate and compete globally. Across the wide variety of B2B and B2C services we provide, we use AI to enhance efficiencies and productivity while constantly improving the range of digital services accessible to our customers. We strongly encourage the development of a human-centric AI as a way to secure public confidence and public / private investments.

We are keen to highlight the many day-to-day applications of AI used by EUTA members, and how these applications bring tangible benefits to EU businesses and consumers alike. Simultaneously, and as with any new transformative technology, it is useful to identify and address any challenges or risks that may arise, such as legal uncertainty and ethical questions

around AI. We aim to be a constructive voice in this regard, and act as a sounding board with both business acumen and hands-on technical AI expertise.

With these objectives in mind, we urge the EU institutions to conduct a thorough assessment of the existing legislation before introducing any new proposals specifically targeting AI-driven technologies and applications. Any new rules should also seek to address loopholes in the existing data protection, data security and liability regime. With this in mind, we have set out a series of high-level principles on AI to provide an insight into the key challenges and opportunities facing EU businesses with AI capabilities, and to also ensure the development of a fair and sound AI framework in Europe.



Gianpiero Lotito

Gianpiero Lotito
President of the EUTA

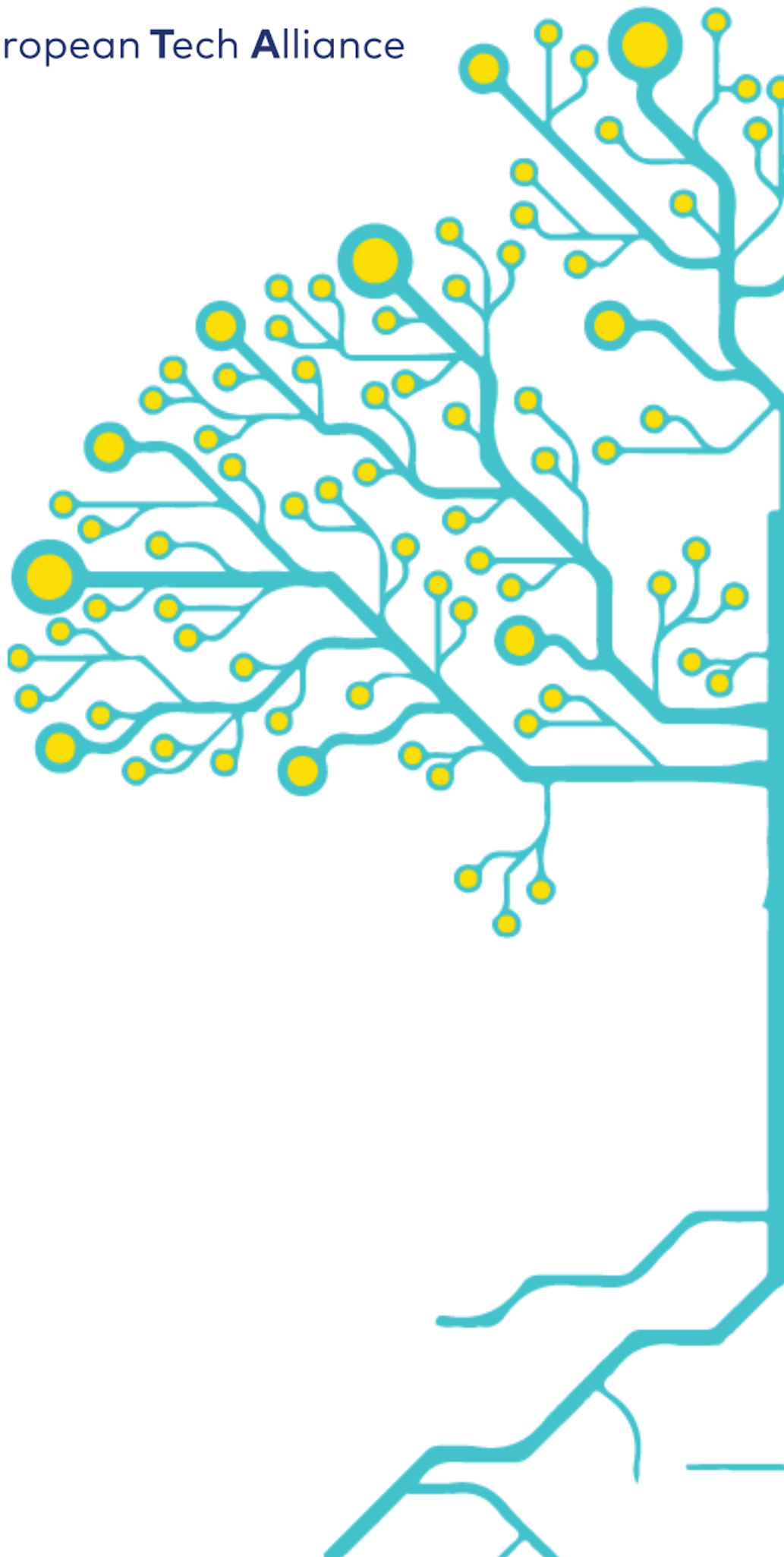
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Chair of the EUTA





European Tech Alliance



Introduction to AI & Key Definitions

Understanding AI

AI and machine learning are commonly used by EUTA members to make small, everyday business activities more efficient. First and foremost, AI enables us to make decisions faster while improving the customer experience. Some key definitions are set out below:

What is an algorithm? An algorithm is a calculus method (or a finite sequence of well-defined instructions) to resolve a class of problems. It is commonly used for online data processing, computer operations and mathematical calculations. An algorithm can also be used to leverage data in various ways, i.e. inserting a new data item in a specific data collection structure, searching for a particular item or sorting a collection of items. Not all cases of using algorithms amount to use of AI

What is AI? The definition of AI has changed over time. Today AI can be defined as the ability of a machine, software or system to act intelligently, in the sense that it is not programmed to perform a single, repetitive motion, but can learn and adapt its predictions and behaviour depending on the environment and on the data it ingests. The “learning” element is what differentiates AI from algorithms, which are static and do not adapt to feedback. AI is therefore a

dynamic process that delivers increasingly precise results. At the same time, AI is only data-driven, and lacks contextual awareness, holistic understanding, and cannot be compared to a far more complex human intelligence. Today the general consensus is that we have achieved ‘narrow AI’ capabilities - where a technology can outperform humans in a very narrowly defined task - but we are still a long way from ‘general AI’ capabilities at scale, where a machine can apply knowledge and skills in different contexts, similar to humans.

What is machine learning? Machine learning is a subcategory of AI, whereby a machine learns without explicit programming, by identifying patterns or trends in data inputs and adapting accordingly. Machine learning relies on data to automatically re-program a system.

What is deep learning? Deep learning is a subset of machine learning where artificial neural networks or computing systems are trained to solve complex issues and learn from large, diverse, unstructured and interconnected amounts of data. Deep learning can process a wider range of data resources while requiring less data preprocessing by humans, and can often produce more accurate results than traditional machine learning approaches.

AI as an engine for European Growth

AI is already enabling breakthroughs in various sectors, from greater operational efficiency to major innovations. AI is employed for a wide variety of purposes ranging from customer service improvement, internal processes automation, fraud detection, safety fault prevention or in radiotherapy, where deep learning is essential to optimise cancer treatment efficiency.

For European tech companies, AI is increasingly vital to respond to customer demand for high-quality, personalised goods and services. Inter alia, AI allows EUTA members to perform various tasks.

Examples:

-  Deliver personalised music recommendations based on users' preferences and listening habits which enable them to discover and enjoy more of the content they love;
-  Provide customers with safe holiday accommodation through fake property detection, thanks to data labelled images and constant evaluation of the model;
-  Provide customers with the most appropriate choice of clothing, shoes or books based on their personal preferences (style, interest or price) amid millions of products;
-  Highlight key information from customer reviews to ensure the information is user-friendly and more easily-accessible;
-  Combine Internet searches with market statistics to propose bespoke product recommendations in a timely manner (for example, online adverts);
-  Increase the customer service experience, by predicting customers' intent & providing them with quick, easily understood advice through chatbots;
-  Improve logistics by bundling e-commerce parcels together and calculating the fastest way to the end-user;
-  Prevent fraud, inappropriate content or dishonest behaviour on marketplaces or dating apps, e.g. detection of fake profiles, inappropriate images or counterfeited goods;
-  Boost operational efficiency by bulking huge amounts of data / automated classification of thousands of products into relevant categories on a marketplace;
-  Personalise email communications (with product recommendations and vouchers) based on each client's shopping habits;
-  Offer instant translation of webpages around the world and around the clock to facilitate good customer experience.
-  Automated playtesting using deep learning and the cloud to get significantly faster feedback for level designers allowing them to focus on their core creative roles and getting players better content more quickly.

“EUTA High Level Principles on Artificial Intelligence”

The aim of the EUTA’s high-level principles on AI is twofold: First, we wish to provide insights on the key challenges and opportunities facing EUTA members with AI capabilities; and second, we would like to lay down principles that should guide the EU’s on-going assessment of a potential AI regulatory framework.

1.

Promote European leadership and competitiveness by avoiding over-regulation of low-risk AI applications

EUTA members strongly believe that their AI-driven applications and technologies are low-risk, as these applications do not pose any risks to the physical well-being or fundamental rights of the end user. Similarly, most of our AI uses do not pose systemic threats, for example, to public health and safety, law or financial stability. We firmly believe risk is the right metric to define the scope of any new rules in relation to AI, and we are supportive of the EU’s commitment to avoid over-regulation that would freeze innovation and investment in AI.

At the same time, we acknowledge that certain risks do exist and a robust risk assessment framework is needed to help mitigate these risks. In this context, it will be important to consider a variety of factors, including the rationale behind AI use, any potential negative impact on specific individuals, the category and quality of data inputs, existing technical and procedural safeguards to amend oversights or biases, model robustness and the degree of human intervention. We stand ready to work alongside policymakers to help develop a future-proof, risk-based framework that is flexible enough to reflect AI’s general purpose while addressing specific challenges.

2.

Ensure regulatory consistency on AI to avoid hampering R&D and innovation

While existing legal schemes and doctrines can, in most cases, be readily applied to AI development and R&D, specific areas of AI development would benefit from harmonisation through a single set of European rules to avoid a potential patchwork of national legislation.

For EUTA members, regulatory consistency with GDPR will be paramount to continue providing best-in-class products and services. Indeed, GDPR already places restrictions on automated decision-making and provide individuals the rights to be

informed of the logic behind such decisions and challenge the decisions, i.e. articles 14 and following under GDPR. **Any new EU rules must be carefully evaluated to avoid duplication or contradiction with the existing data protection legal framework, but also all other adjacent frameworks such as contractual law.** EUTA also believes the e-Privacy Regulation as currently proposed will hamper Europe's leadership in AI. We call on the EU to make a fresh start with this proposal, and withdraw the text until the GDPR's implementation and effectiveness have been thoroughly assessed.

3.

Advocate for human-centric AI development

In line with the European Parliament Resolution on AI from February 2019, EUTA members advocate for a human-centric AI development that would avoid possible misuses of AI technologies to the detriment of fundamental rights. EUTA members are also closely monitoring the work of the High-Level Expert Group on Artificial Intelligence and release of Ethics Guidelines in 2019. **Building on the Ethics Guidelines for Trustworthy Artificial Intelligence, EUTA members would support self-regulatory principles for accountability and**

transparency to help businesses tread market opportunities and the possibility for unfair bias and discrimination. The most resource efficient approach in this regard could be to focus on inputs, outputs and feedback loops, while also considering the specific characteristics of high-risk applications of AI. As EUTA represents some of the largest and most innovative technology companies across Europe, we believe that AI should be developed and used in line with ethical standards and have already made significant investments in this regard, including in bias-aware product development.

4.

Set EU rules to encourage self-regulation to mitigate negative bias

All Internet users tend to be naturally biased or express bias in their online activities. Data that are fed into an algorithm can exacerbate an initial bias or personal preference expressed by a specific user (e.g. if a user only orders sports books from an online marketplace, the algorithm will tend to exacerbate the initial bias expressed by the user by suggesting books matching the user's interests). **As a result, there is a difference between an unbalanced result and a biased result. An unbalanced result can seem biased, but is actually objective because the data inputs are genuinely representative of the reality.** A biased result, however, can be the result of unrepresentative data inputs or even biased system design (e.g. when a system is designed by white men only).

Within this context, providing full transparency on algorithm bias or explaining automated decisions in a meaningful way to all Internet users is complex, creating unnecessary red tape and burdensome requirements for European businesses relying on low risk AI applications. **The most appropriate technical and organisational measures for mitigating AI risks from the outset will be situation-dependent. For low-risk applications, EU businesses should have the flexibility to choose measures that will deliver the best outcomes.** EUTA members also believe that EU rules could help encourage self-regulation while also providing a useful transparency toolbox.

Some examples are:

- Transparency could be fed into Data Protection Impact Assessments, a key compliance tool for certain forms of AI processing under GDPR [2]. Controllers using AI systems to process data or make decisions about individuals are required to take steps to prevent discriminatory behaviours in such systems to avoid breaching existing EU legislation;
- On technical measures, if the bias or discrimination is caused by an unbalanced data set, 're-balancing' the data, with addition or removal of new data, can be taken as a solution;
- Other solutions, albeit even more complex than 're-balancing' data, can consist in training the system differently, or modifying the system post-training to achieve algorithmic fairness;
- Striving to have a diverse workforce can also be a powerful tool to manage bias in AI systems, as recently suggested by the UK ICO[3].

[2]: The GDPR Recital 71 states that data controllers should take measures to prevent 'discriminatory effects on natural persons on the basis of racial or ethnic origin, political opinion, religion or beliefs, trade union membership, genetic or health status or sexual orientation, or processing that results in measures having such an effect'.

[3]: Accessible online at: <https://ai-auditingframework.blogspot.com/2019/06/human-bias-and-discrimination-in-ai.html>



5.

Build up Pan-European Data Commons to tackle AI research siloes and overcome restrictions on access to public datasets

Public data sources are often disparate and complex, leading to a general fragmentation in terms of access and quality. Siloed working, inconsistent collection methods and a lack of rules around data format interoperability inhibit research and innovation that could be derived from datasets. EUTA members are supportive of building up a voluntary AI platform serving as a central point to gather and provide access to all publicly funded AI related knowledge and algorithms. For publicly funded datasets to be accessed by a wider community of users, the [French Etalab](#) is a good initiative that could be replicated across EU Member States and potentially merged to optimise common resources.



6.

Ensure that AI regulations are future-proof with regulatory sandboxes to avoid preempting AI innovation

Without contemplating any new specific provision for AI in the near future, the European Parliament initially recommended to “regularly re-evaluate current legislation to ensure that it is fit for purpose with respect to AI while also respecting EU fundamental values and to seek to amend or substitute new proposals where this is shown not to be the case”, while also monitoring the relevance and effectiveness of intellectual property rules. In line with the European Parliament, EUTA members would welcome a wider use of ‘regulatory sandboxes’ which consist of offering to AI operators an opportunity to test, under real conditions, the safety and efficacy of their technologies by temporarily releasing them from regulatory constraints.



7.

Create more synergies between public and private research in AI

EUTA members are key contributors to private research in AI. EUTA members are committed to closing the skills gap in AI and are supportive of the DG CONNECT's initiatives in this regard. Yet despite massive investments and the EU academic excellence, Europe is still lagging behind in the global skills race. It is therefore urgent for the EU to boost the emergence of AI training modules across the EU, while also facilitating researcher mobility between the public and private sectors. Public research institutions are the EU key asset in the field of AI and more synergies between the public and private sectors should be urgently explored.



8.

Attract the best talents in Europe

To fuel AI research and development, EUTA members need to attract and retain the best talents in Europe. Member States should be encouraged to provide special residence permits for AI specialists coming from third countries to work for European companies. In the same vein, promoting relevant and attractive university programmes, with a special emphasis on bringing girls or women to these fields of expertise, should also be a priority of European institutions and governments.

Ensuring a regulatory framework which is technology neutral and provides for the opportunity to develop the most advanced forms of AI is also key today to retaining talents trained in Europe.

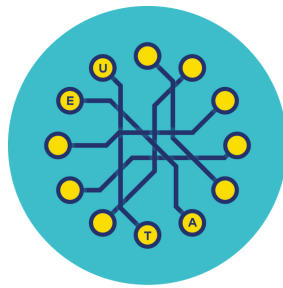
9.

Promote EU capacity-building and independence in the supply of components and computing systems, data infrastructure & web platforms

Cybersecurity is a key component for AI development in Europe. In its Resolution on AI published in February 2019, the European Parliament devoted an entire section to cybersecurity & called for preventing loopholes, cyberattacks and misuse of AI, by implementing “product safety controls by market surveillance authorities and consumer protection rules.” EUTA members support the European Commission’s proposal to boost EU owned cloud capabilities, through an EU investment plan in new cloud capabilities and new requirements for cloud services marketed in the EU (around cybersecurity, data protection, energy efficiency & portability/ interoperability).

However, any initiative seeking to address the EU dependency on the foreign supply of components and computing systems, data infrastructure and web platforms, must consider that EU-based companies are currently relying on components, systems & infrastructure coming from third countries – mostly China and the US. As a result, it will take years before any EU initiative can close the EU IT capability gap, due to the legacy of massive investments already made in other regions. Overall, EU companies should retain commercial freedom to choose the best possible offer suited to their business, irrespective of the country of origin.





European Tech Alliance

The European Tech Alliance (EUTA) brings together and give a voice to the major European digital champions, scaleups and leading startups. We believe that Europe is good at tech and our sector is driving jobs and growth across the continent. With an overarching goal of fostering innovation in Europe, EUTA members are keen to provide expert insights to the EU institutions and promote the EU competitiveness in the global AI race.

This paper has been developed at a preliminary stage in the policy discussions in order to share our members' expertise and inform the debate. It is not directly attributable to any individual member and we invite you to contact our members, should you like to better understand their specific situation.

