International Federation for Information Processing (IFIP)

https://www.ifip.org/

Contacts: Dr Anatolii Marushchak, Professor, IFIP General Secretary, anatolii.marushchak@ifip.org, Anthony Wong, Adjunct Professor, President, president@ifip.org

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IFIP was established in 1960 under the auspices of UNESCO and is incorporated in Austria. The Mission of IFIP is to achieve the worldwide professional and socially responsible development and application of information and communication technologies.

IFIP links over 4,000 scientists from academia and industry, with more than 100 Working Groups reporting to 13 Technical Committees covering subject areas including Artificial Intelligence, the Internet of Things (IoT), Information and Communication Technologies (ICT) Education, ICT Skills, ICT and Sustainable Development, Gender, Diversity and ICT, Entertainment Computing, Human-Computer Interaction, and Computers and the Environment.

IFIP is the leading multinational organization in ICT and sciences, recognized by United Nations and other

The proliferation of systems imbued with increasingly complex mathematical and data modelling, and machine learning algorithms, are being integrated in virtually every sector of the economy and society, to support and in many cases undertake more autonomous decisions and actions. Previously, technologies have been deployed more like tools, but as autonomy and self-learning capabilities increase, intelligent systems will feel less and less like machines and tools.

Historically, new technologies have always affected the structure of the labour market, leading to a significant impact 3 (s)-1.4 (,)-1 3d4-3 (e)7.9 im2-6.7(l)10.6 (o)-6.3 (y)6.9 im le int,iesheificallyogihr sarked anda m anuobls

and national, local and school websites should provide for these at a similar but more locally contextual level.

Digital education must be accessible to and inspiring for all young people, positively accommodating diversity, inclusion, the digital divide and the under-represented, with ways that 'inclusive digital education' can be considered, if current limitations that are seen across the world are to be addressed. Teachers involved need to be supported with ongoing updated details about how all young people can be inclusively engaged with ICT, irrespective of, for example, gender, race, physical disability, or language.

Computational thinking and computing should be included within the curricula for young people, ensuring that activities support longer-term engagement and inspiration, as a bedrock for developing practices in uses of digital technologies across the wider school curriculum, which can include computer science, all

and what to learn, to use our critical thinking, to learn the art of asking questions, especially with Generative AI and the know-how of discernment.

We are facing a major paradigm shift which will require significant rethink of some of our long-established structures and principles, as we must now take into consideration, machine learning systems that have the ability 'to learn', adapt and 'make decisions' from data'.

We are and will be experiencing successive waves of technological change—impacting on how we Work, Life and Play—raising fundamental questions on our values as humans—disrupting our existing business models, our human structures and beliefs on equality and fairness, and our long-established framework of governing laws, regulations and rules. The fast pace of waves of technological innovation will test our resilience as humans to cope with change.

We should pay close attention to automation processes using technology. We are moving rapidly towards a world where autonomous and intelligent systems are connected, embedded and integrated in complex environments. These systems can perform tasks at levels that may increasingly exceed human ability and raise many challenging questions including calls for greater transparency to minimize the risk of bias, discrimination, unfairness, error and to protect consumer interests.

Embedding transparency, accountability and explainability in system design requires more extensive planning and oversight, requiring input and knowledge from a wider mix of multi-disciplinary skills and expertise. Different systems create and pose different benefits, risks and issues. If not appropriately addressed, human trust will suffer, impacting on adoption and oversight and in some cases posing significant risks to humanity and societal values.

With our world undergoing rapid technological recalibration, our Work, Life and Play will be molded by technological advancements in many ways in the years to come. While new job roles will develop, one thing is certain—work in the future will be different.

Global governance should also focus on ensuring that IT service providers and developers are certified to deliver to professional standards: competence; trustworthiness; ethical behaviour and decision-making. IFIP IP3 is tasked with advancing Professionalism in ICT.

ICT professionals understand better than most in relation to the trends and trajectories of technologies and their potential impact on the economic, safety and social constructs of the workplace and societyf tnoo.7(r03 Tw 5 0)-