

Editorial: Embracing the imperative digital transformation!

With the fast development of advanced computing, networks, mobile applications, Internet of things (IoT) and artificial intelligence, organizations and businesses have undergone major transformations by leveraging digital technologies and data science since the dawn of 21st century, aimed at unceasingly improving their organizational competences to stay competitive. In fact, digital transformation is also culturally and socially reshaping every corner of the world. Today, it is well-recognized that digital transformation has fundamentally changed how organizations and businesses operate and deliver value to end users and how we live, learn and socialize. As a result, to us, organizations, businesses, societies or individuals, embracing digital transformation becomes imperative rather than optional.

Although digital transformation has become a trend, adopting the technology socio-physically to transform a business, organization, community or society in an efficient, effective and positive way is more challenging than ever before. We launched *Digital Transformation and Society (DTS)* to promote digitalization research, education and practice that crosses technical, business and social boundaries. *DTS* focuses on publishing innovative and original research and practice papers on all topics related to digital technology, development, and transformation in business and society.

On June 15, 2022, *DTS* office hosted a virtual panel discussion by inviting two internationally well-known scholars in digital humanities, Prof. John Unsworth from the University of Virginia, USA, and Prof. Huiling Feng from Renmin University of China, to share their grand visions and understandings of digital transformation in society and the impact on the development process of humanities today and tomorrow. The panel discussion webinar attracted over 300 attendees from countries and regions around the world. In this inaugural issue, we are honored to have their permissions to publish their interview and panel discussion transcripts. To prepare this inaugural issue, *DTS* office invited many worldwide scholars in the field of *DTS* to submit their research works. After a rigorous review, we selected 6 papers to be included here. They addressed different challenging issues we had confronted in embracing the imperative digital transformation.

In the healthcare industry, electronic health record (EHR) is one of the direct digitization results and have been widely adopted by healthcare providers. Improving healthcare service quality, digital transformation has been focusing on benefiting service providers over the years. Little study on improving healthcare quality from the patient's perspective by leveraging EHRs has been conducted. As an example, clinical medical notes typically contain medical jargons and specialized words and phrases that are not easy to understand by most people, which is one of the most challenging obstacles in health information dissemination to consumers by healthcare providers. Dr. Qiu's team proposed a natural language processing pipeline approach to address the health literacy problem confronted by healthcare consumers. The pipeline extracts relevant information from long unstructured clinical



notes and simplifies lexicons by replacing medical jargons and technical terms. The proposed pipeline can help healthcare consumers well understand their medical information and therefore strengthen communications between healthcare providers and consumers for better care.

Cloud computing has gained a tremendous momentum in providing organizational computing services to meet their digital transformation needs. Dr. Bounfour's team modeled organizational transformation as a function of five aspects of cloud computing practice: functionality, data management, roles and competences of information technology services, control and organizational culture. After they investigated 487 companies in seven countries from Europe, Asia and the United States, two groups of firms, transformational and hyper transformational, were classified. Their findings highlight the key factors that determine whether a firm falls into one of these two groups. To improve employees' well-being during organizational digital transformation, Dr. Fragniere's team conducted research on early detection of human-related risks, aimed at enabling organizations to provide a preventive and simple response to the risks. They found that a long process of trial and error would be necessary to collect confidential information from employees, both anonymously and longitudinally, to measure well-being in the workplace for effective results.

IoT plays an important role in digital transformation. Dr. Ahmad's team provides a systematic literature review about the IoT and its impacts on happiness, aimed at stimulating more discussions relating the adoption of IoT to happiness in human daily life. They identified some potential gaps in literature and proposed certain future research that might help fill those gaps. Since the emergence of the virus in 2019, tracking technologies have been widely adopted in containing the spread of coronavirus disease 2019 (COVID-19). Understanding how people have reacted to the adoption of tracking technologies becomes necessary. Dr. Matt' team investigated the potential long-term effects of their introduction. Specifically, how they negatively impact individuals' attitudes and intentions to adopt future tracking technology. They found that privacy concerns towards the COVID-19 tracing apps negatively impacted attitude and intention to adopt future tracking apps. However, they confirmed that future adoption is more likely if the app is provided by the government.

As of today, there is no doubt that data are the future "oil". Intrusion detection systems (IDS) as one of the data protection means are widely adopted by organization. Dr. Badr demonstrated the advantage of reinforcement learning based IDS to solve very complex problems that cannot be solved by classical machine learning. By overcoming issues related to model drift and lack of generalization in classical machine learning, reinforcement learning is proposed to learn from its interactions with a stochastic environment.

Note that this inaugural issue includes a very small part topics from ones we would like to cover. *DTS* welcomes your submissions on all topics related to digital transformation, including but not limited to your empirical, modeling, theoretical and application studies of all aspects in organization, business, and society digitization and transformation. Collectively and collaboratively, we can develop *DTS* as one of the worldwide flagship journals in the digital transformation field.

Robin Qiu