Democratizing Content Creation and Dissemination through AI Technology

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ABSTRACT

With the rise of mobile video, user-generated content, and social networks, there is a massive opportunity for disruptive innovations in the media and content industry. It is now a fast-changing landscape with rapid advances in AI-powered content creation, dissemination and interaction technologies. I believe the current trends are leading us towards a world where everyone is equally empowered to produce high-quality content in video, music, augmented reality or more – and to share their information, knowledge, and stories with a large global audience. This new AI- powered content platform can further lead to innovations in advertising, e-commerce, online education, and productivity. I will share the current research efforts at ByteDance connected to this emerging new platform through products such as Douyin and TikTok, and discuss the challenges and the direction of our future research.

CCS CONCEPTS

• **Computing methodologies**; • **Artificial intelligence; Information systems**; • **World Wide Web.**;

KEYWORDS

Artificial Intelligence, Democratizing Content Creation and Dissemination

1 BIOGRAPHY

Wei-Ying Ma is a Vice President and the Head of AI Lab at ByteDance. He is responsible for fundamental research and technology development in areas including machine learning, computer vision, speech and audio processing, natural language processing, personalized recommendation and search. The technologies from his teams have been used by hundreds of millions of users daily through ByteDance's content platforms and core products such as Jinri Toutiao and Douyin. Prior to ByteDance, Wei-Ying Ma was an Assistant Managing Director at Microsoft Research Asia. He developed many technologies that were successfully transferred to Microsoft's Bing, Ads Center, Cognitive Services, Exchange,

SharePoint, Azure, and Xiaoice. He has contributed to many open-sourced technologies at GitHub, including the Distributed Machine Learning Toolkit, Microsoft Graph Engine and Microsoft Concept Graph.

Wei-Ying Ma has published more than 300 papers at international conferences and in journals. He has been granted with more than 160 patents. He is a Fellow of the IEEE. He has served as program co-chair of the International Conference on World Wide Web (WWW) 2008 and the general co-chair of ACM Special Interest Group on Information Retrieval (SIGIR) 2011. He has served on many editorial boards including ACM Transactions on Information System (TOIS), the ACM/Springer Multimedia Systems Journal, and the Journal of Multimedia Tools and Applications. He was a member of International World Wide Web Conferences Steering Committee from 2010 to 2016. He was awarded a Distinguished Alumni from the EECS of National Tsing Hua University in 2010. He received the honor to deliver a Distinguished Lecture at University of California at Santa Barbara ECE 50th Anniversary in 2013.