Reduced-Complexity Scene Text Recognition Techniques

Mr. BUOY Rina

He received the B.S. and M.S. degrees in petroleum engineering from Universiti Teknologi PETRONAS, Malaysia, in 2012 and 2022, and the M.S. degree in IT engineering from the Royal University of Phnom Penh, Cambodia, in 2022. From 2012 to 2019, he was a petroleum engineer and R&D team lead at Three60 Energy Asia (formerly, LEAP Energy), Kualar Lumpur, Malaysia. Since 2020, he has been a machine learning engineer at the Techo Startup Center of the Ministry of Economy and Finance, Cambodia. Currently, he is a PhD student at Osaka Metropolitan University, Osaka, Japan. He has published multiple peer-reviewed papers at Elsevier, IEEE, MDPI, and Springer.

Abstract:

In this talk, he will explore two novel techniques to reduce model complexity and enhance the latency in scene text recognition (STR) while balancing recognition accuracy. Firstly, he proposed a feature selection technique that keeps only the text regions required for accurate character recognition and removes unnecessary computations in the background regions. Secondly, he proposed a partially autoregressive (PAR) decoder and two decoding schemes to accelerate the decoding process while maximizing recognition accuracy. The experimental results show that the proposed techniques can significantly reduce model complexity and enhance latency while maintaining recognition accuracy.

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