Department of Computer Science
香港城市大學
City University of Hong Kong

**COMPUTER SCIENCE COLLOQUIUM**

# The Power of Model Sparsity


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VENUE Y6405, Yellow Zone, Yeung Kin Man Academic Building, City University of Hong Kong, Kowloon Tong, Hong Kong

## ABSTRACT


Deep neural networks (DNNs) have achieved significant breakthroughs across various fields, propelled by their scaling up in size and capability. However, this increase in scale also brings hefty memory and computational demands, leading to considerable environmental and financial burdens. In response to these challenges, model sparsity has emerged as an effective solution. This approach significantly reduces resource requirements while maintaining performance levels. More than just improving efficiency, model sparsity also enhances other aspects such as fairness in AI systems. This presentation will discuss the various benefits that sparsity brings to AI systems.


## BIOGRAPHY

Lu Yin is an Assistant Professor in the Department of Computer Science at the University of Aberdeen and a long-term visiting scholar at Eindhoven University of Technology (TU/e). He received his Ph.D. degree from TU/e, and his Master's and Bachelor's degrees from the Harbin Institute of Technology. Before joining the University of Aberdeen, he served as a Postdoctoral Fellow at TU/e and worked as a research scientist intern at Google NYC. His research interests include AI efficiency, AI for science, and Large Language Models.

**All are welcome!**

*In case of questions, please contact Prof Ma Kede at kede.ma@cityu.edu.hk, or visit the CS Departmental Seminar Web at https://www.cs.cityu.edu.hk/events/cs-seminars/recent-cs-colloquiums.*