



## RESEARCH SEMINAR

# Efficient and Green Code LLMs: Happier Software Engineers, Happier Planet



### Prof. David LO

OUB Chair Professor and Director  
Information Systems and Technology Cluster  
School of Computing and Information Systems  
Singapore Management University  
Singapore

**Date** : 20 August 2025 (Wed)  
**Time** : 3:00 pm - 4:00 pm  
**Venue** : PQ304

## Abstract

Many are excited about the potential of code Large Language Models (code LLMs). However, code LLMs are large, slow, and energy-hungry compared to traditional automated software engineering solutions, which raises usability and sustainability concerns. This is especially true when we want to deploy them in IDEs on local devices, which is often the preferred setting. This talk will highlight several strategies to improve the efficiency and energy consumption of code LLMs. It will also present a vision of what the future can be with efficient and green LLM and a call for action for more research in this direction to make both software engineers and our planet happier.

## About the Speaker

Prof. David Lo is the OUB Chair Professor of Computer Science and the Founding Director of the Center for Research in Intelligent Software Engineering (RISE) at Singapore Management University. Championing the area of AI for Software Engineering (AI4SE) since the mid-2000s, he has demonstrated how AI - encompassing data mining, machine learning, information retrieval, natural language processing, and search-based algorithms - can transform software engineering data into automation and insights. His contributions have led to over 20 awards - including four Test-of-Time awards and twelve ACM SIGSOFT / IEEE TCSE Distinguished Paper awards - and gathered more than 40k citations. An ACM Fellow, IEEE Fellow, ASE Fellow, National Research Foundation Investigator (Senior Fellow), and a recipient of the MSR Foundational Contribution Award and IEEE TCSE Distinguished Service Award, Prof. Lo has also served as a PC Co-Chair for ASE'20, FSE'24, and ICSE'25. For more information, please visit: <http://www.mysmu.edu/faculty/davidlo/>.