Bayesian Optimisation of Graph-based Functions

About the talk

The increasing availability of graph-structured data motivates a new type of optimisation problems over graph-based functions, i.e., searching for the graph or node that maximises the value of an underlying function. Such optimisation problems are challenging due to the discrete and high-dimensional search space, as well as the underlying function that is often black-box and expensive to evaluate. In this talk, I will provide several examples on how Bayesian optimisation can be used to optimise graph-based functions, with practical applications in computational, epidemiological, and social networks. More broadly, these examples demonstrate the promise in combining probabilistic and geometric reasoning in analysing complex functions.

Speaker



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Date and time

27 May 2025, 4 pm Singapore (GMT +8) UK (GMT +1)

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