Summary of the talk: Alzheimer’s disease (AD) is the most common subtype of dementia, and is an increasing major medical problem with significant social and economic health burden globally. Current new therapeutic efforts focus on early AD treatment; however, the diagnosis of AD is complex, and typically involve expensive and sometimes invasive tests not commonly available beyond highly specialized clinical settings. There is a clear need to develop simple methods to identify asymptomatic individuals who are more likely to have AD in the community. Recently, Dr Cheung’s team has developed a deep learning (DL) convolutional neural network that aims to provide a simple retinal-imaging-based screening tool to identify individuals at risk for AD. They believe that classification of AD based on retinal imaging could leverage existing community eye-care infrastructure (e.g., optometry networks) that enables opportunistic AD screening during routine examination and screening for common eye diseases. For example, deep-learning algorithms are already in use for community diabetic retinopathy (DR) screening. Higher-risk individuals identified by our proposed DL model could then benefit by selective referral for more intensive and specific examinations (e.g., PET imaging, plasma assays for amyloid-β and phosphorylated tau) at more specialised clinics for definitive AD diagnosis, possibly at earlier stages for preventive measures.