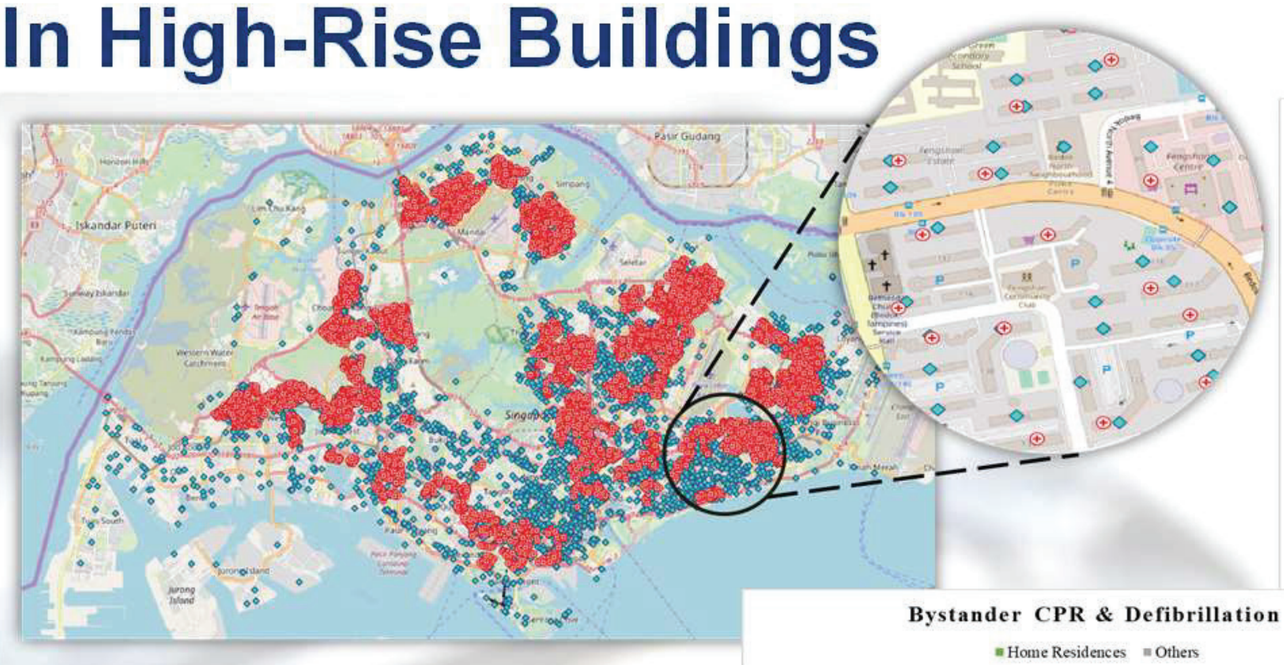
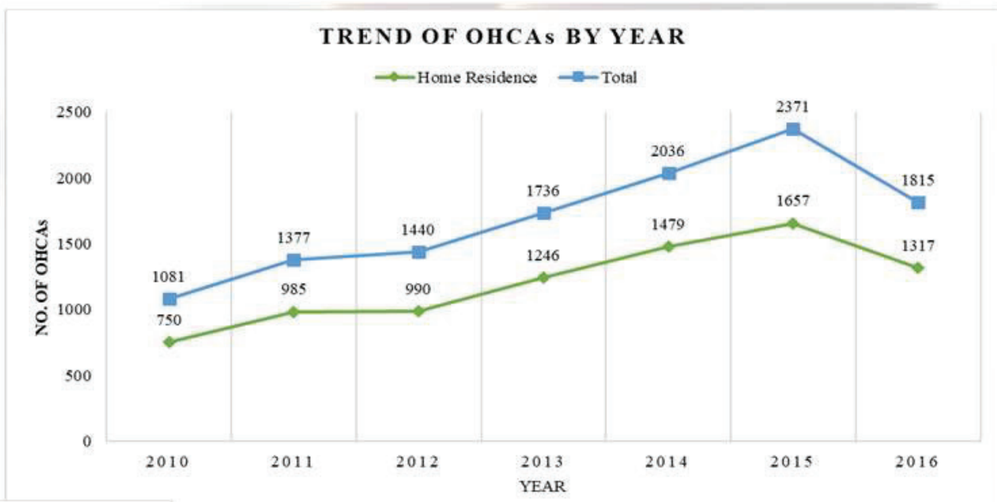
NANYANG TECHNOLOGICAL UNIVERSITY
SINGAPORE

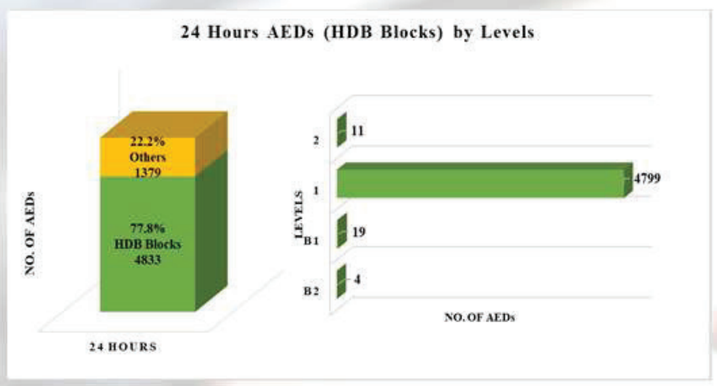
School of Computer Science and Engineering
College of Engineering

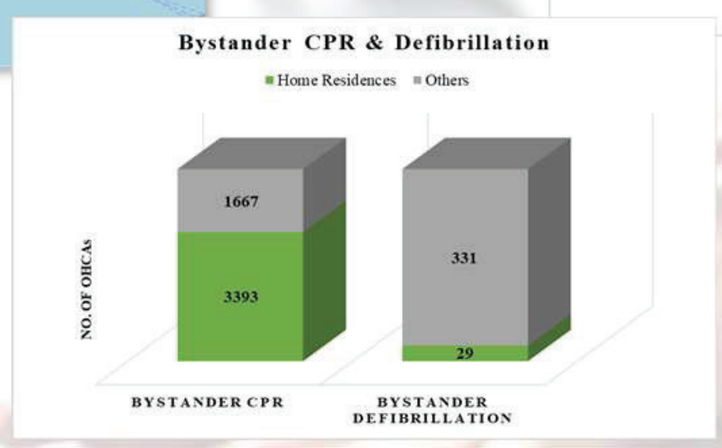
AUTOMATED EXTERNAL DEFIBRILLATOR (AED) PLACEMENT OPTIMIZATION

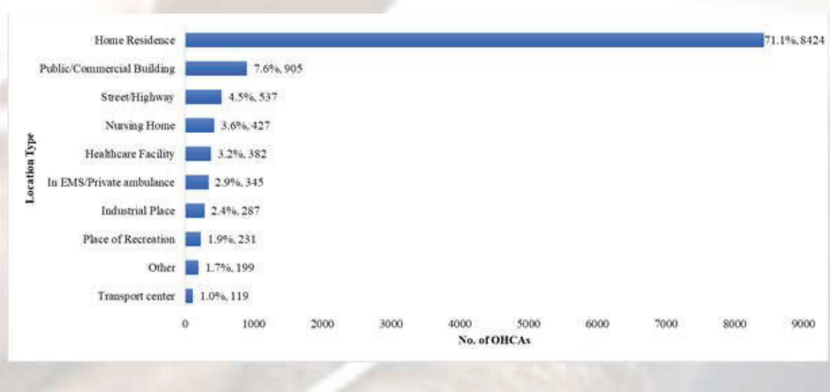
In High-Rise Buildings

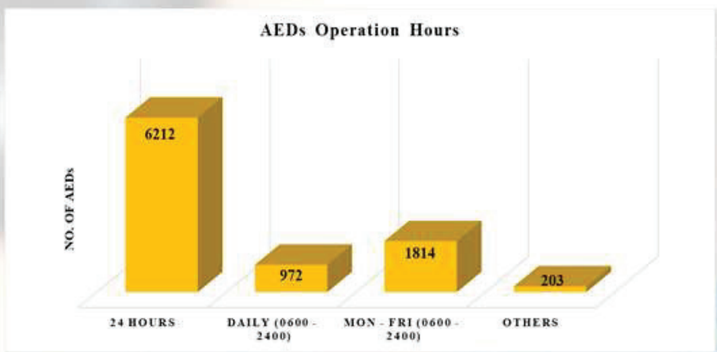


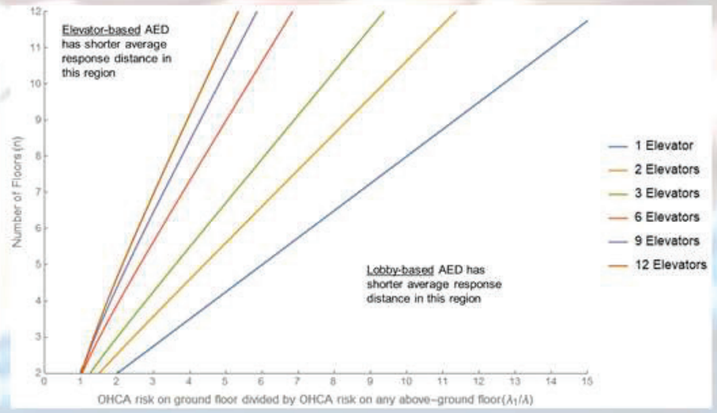


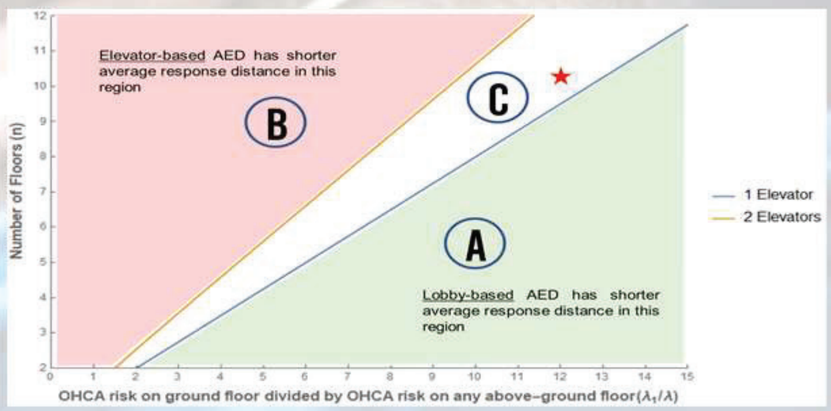












This project aims to mathematically analyze the AED placement in a high-rise building in Singapore and determine whether elevator-based or lobby-based AED placement results in shorter vertical distance travelled. The analysis solely depends on the height of the building and the relative risk of OHCA on each floor.

Our results suggest that cardiac arrest in high-rise buildings may experience faster response from a lobby-based AED when a building has more than one elevator whereas elevator-based would be optimal if the OHCA risk for the ground floor is lower than the risk of the above-ground floor.

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