

2022 School of EECMS Summer Internship Application Form

Main Supervisor	Dr Sonny Pham
Is the main supervisor an ECR/MCR?	YES/NO NO
Other supervisors (if applicable)	Professor Sambit Datta
Project Title	Predicting energy consumption of campus buildings based on architectural and geolocation features
Duration of project (select between 4 and eight weeks)	8 weeks
Project Description	<p>Climate change is the most challenging task that the world is facing. Energy consumption is one main factor that contributes to global warming. There are regulations in place to ensure new buildings meet stringent energy standards. However, there are still a large number of residential and commercial buildings that consume much energy. Therefore, it is important for the authority and relevant organisations to be able to predict the energy consumption of buildings for better planning of our cities.</p> <p>This project aim at developing a novel model to predict energy consumption based on architectural (such as size, age, geometry, construction materials, etc.) and geolocation (weather, landscape, environment, etc.). When such predictive model is available, we will correlate these features to energy consumption parameters such as heating, air-conditioning, lighting, etc. The primary data set used for model training and validation is Curtin Bentley campus with information over 50 3D buildings, micro-climate and their energy use.</p> <p>The candidate is expected to be a competent Computer Science student with a background in artificial intelligence and/or data analytics. Good communication skills and the ability to deliver research outputs are expected.</p>