

Optimize daily lives with IoT devices

Context

Internet of thing (IoT) devices have radically transformed the daily lives of modern man ranging from monitoring one's health and wellness to creating a "smart" living environment for optimal energy consumption. In this project, we are interested in studying data generated from large number of IoT devices and using IoT readouts to accurately recapitulate the daily lives of man dwelling in an urban environment. Such information is extremely helpful in streamlining day to day processes and most importantly, to help reveal the patterns of human behavior for the design of a better environment for the population to dwell in. However, one of the key question in investigation is, how can we better define the type and architecture of IoTs required? It is thus of interest of this internship to define such IoT architecture for better data capture which is integral in enhancing the way we study human mobility.

Description

In this project, the selected intern will be tasked to resolve high dimensional read-outs from IoT devices and to define the necessary IoT infrastructure required to accurately map the daily trajectory of individuals dwelling in contemporary urban environment. The project entails, but not limited to, data collection, data preprocessing which includes noise filtering and signal processing from IoT devices, and the definition of an optimal architecture that best captures the human trajectory.

Keywords

IoT, signal processing, process optimization, machine learning

Applicant profile

- Knowledge of programming in any languages
- Knowledge of data mining and machine learning techniques
- Awareness in topics pertaining to IoT, IoT architecture and signal processing
- Ability for driving himself his own duty with proactivity and independence
- Excellent English skills

Duration

The internship has duration of 6 months starting from mid-February onwards. (Note that the Student Visa application may take time and then delay the starting date).

Gratification

1500 SGD per month

Supervisors

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