Multimodal SME building data:

Multimodal data was captured once per minute. These dataset include thermal IR data, carbon dioxide level, temperature level and motion (as captured by a PIR sensor). The thermal IR data are recorded as 24 x 32 pixel .jpg timestamped files, carbon dioxide, temperature and motion are recorded as numeric data saved to a text file with a timestamp. The data was captured in three different environments within a small medium sized enterprise (SME), the office, meeting room and kitchen. All of the data are labelled positive or negative to indicate whether occupants are present or absent. For the thermal IR images, the labels are indicated based on whether the files are saved in a directory “positive” or “negative” directory. For the numeric data, the labels are added to the text file. The Occupant numbers range from 0 – 6 at any time. Note, for each time sample, all 4 data modes are captured. Where a single data mode was not captured, all 4 data modes for that specific time sample are removed from the dataset. These datasets were captured as part of a PhD Thesis entitled Occupant-Centric Energy Management for Small Commercial Buildings by Ruth Ande.

Summary of each dataset

Kitchen Directory:

co2\_cleaned-kitchen-normalised.csv – normalised co2 data

tem\_mot\_co2\_cleaned-kitchen.txt – actual temperature, actual motion, actual co2 data, label

tem\_mot\_co2\_cleaned-kitchen-normalised.csv – normalised temperature, actual motion, normalised co2, label

negative directory – negative thermal IR data images

positive directory – positive thermal IR data images

Meeting room Directory:

co2\_cleaned-meetingroom-normalised.csv – normalised co2 data

tem\_mot\_co2\_cleaned-meetingroom.txt – actual temperature, actual motion, actual co2 data, label

tem\_mot\_co2\_cleaned-meetingroom-normalised.csv – normalised temperature, actual motion, normalised co2, label

negative directory – negative thermal IR data images

positive directory – positive thermal IR data images

Office Directory:

co2\_cleaned-office-normalised.csv – normalised co2 data

tem\_mot\_co2\_cleaned-office.txt – actual temperature, actual motion, actual co2 data, label

tem\_mot\_co2\_cleaned-office-normalised.csv – normalised temperature, actual motion, normalised co2, label

negative directory – negative thermal IR data images

positive directory – positive thermal IR data images

Office data was captured 12:00 on 23/04 - 23:59 on 22/05. Kitchen data was captured between 26/05 – 30/05. Meeting room data was captured between 03/06 – 05/06.