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## Office Occupancy Detection based on Power Meters and BLE Beacons

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## Stellingen

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# Office Occupancy Detection based on Power Meters and BLE Beacons

van

**Azkario Rizky Pratama**

1. Accurate data labeling is a painful manual task, but it is imperative for knowing the actual states and, accordingly, building good and usable models.
2. Power consumption traces may reveal the state of operating appliances and indicate occupancy. The farther power meter deployment is from occupants (i.e., from plug metering to sub-metering), the less obtrusive it is, yet the information content is consequently lower. (Chapter 3)
3. In an office environment, electric load identification based on sliding windows is more reliable than based on switching-event detection. (Chapters 4 and 5)
4. Electric load identification based on event detection struggles when more devices are involved with low power consumption. Additionally, the distinction between similar devices in an activation state is hard to achieve. (Chapter 4)
5. BLE beaconing proximity-based localization is not accurate, but it suffices for room-level occupancy detection. (Chapter 6)
6. Adding low-obtrusive sensors to office occupancy detection systems might, but does not necessarily, improve the precision. (Chapter 7)
7. No plan is certain except those that Allah *subhanahuwata'ala* has decreed for us. (Al-Qur'an Surah At-Takwir [81:29] and life experiences)
8. Life is 'trying things to see if they work'. (Ray Bradbury)