CS4400: Assignment 1

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D-Stream

Review paper: Internet of Things for Smart Cities-

- **Five key conclusions-**
  - Internet of things can be used to exploit technologies and design systems which will immensely improve the services for citizens and improve administration.
  - As so many different things are involved therefore finding solutions that are fit for every application scenarios are a big obstacle.
  - The deployment of internet of things is also hindered as it lacks a widely accepted business plan hence this technology is closed to being standardised but not fully.
  - There are still uncertainties over the use of these technologies, but these are developed enough to be implemented and remove all the uncertainties that exists.
  - Internet of things will make the access to public resources simple and economical.
- **Five key technology insights-**
  - Internet of things can be used to monitor the structural health of the buildings through various sensors.
  - Waste management can be made economical both in cost and space.
  - Air quality can be monitored.
  - Energy consumed by the city and be monitored and kept under check.
  - Traffic can be monitored, and congestion can be managed in a better way.

Tutorial paper: Cognitive Internet of Things: A New Paradigm Beyond Connection-

- **Five key conclusions-**
  - General objects should not only see, hear or smell but also learn, think and understand.
  - Cognitive approach can fill the void between physical world and social world.
  - Systems can function more intelligently.
  - Allocation of resources can be done in a smarter and economical way.
  - Cognitive approach faces many challenges, it is a thing for future but cannot be implemented in present.
- **Five key technology insights-**
  - Objects learn by themselves.
  - Intelligent systems can be developed such as smart tv or intelligent transport network.
  - Less human intervention that is less chances of error.
  - Efficiency of an object increases manifolds.
  - Time and energy efficient system.

- **Five key insights of relevance to scalable computing-**

  With internet of things everyone will be able to involve themselves in the system as this would greatly increase the transparency. Resources and time will be managed in a better way. Cognitive internet of things will make current internet of things much more intelligent. The computers will be able to learn themselves, they will directly interact with physical world and form their response to the various stimuli.