2/7/14 Datahack-0: Geographical data

1. **Quantification**
   (a) What is the total length of cycle paths in Leeds?
   (b) What is the fastest/flattest/safest/best route from X to Y?
   (c) Where's my nearest 'good' 10k cycle route?
   (d) What happens if we build a new route?
   (e) Can we add time/weather/seasonal hazards and effects?
2. **Network analysis**
   (a) How can junctions be detected?
   (b) How can we convert the information into a graph (e.g., networkx)?
   (c) Can we analysis properties of the network (e.g., centrality, communicability, persistent hubs, small-world property, etc)?
   (d) What is the network effect of building new roads?
3. **Computational**
   (a) How can we be confident in our answers?
   (b) Can we map our data onto OS maps?
   (c) How can we tell if data is automatically generated or actual input from users?
   (d) Is Python a good or bad tool for this type of problem?
4. **Big-data**
   (a) Which methods, algorithms and procedures scale well with geographical size?
   (b) Is anything we did more generally applicable?