

However, big GPS trajectory data comes with its own challenges...

- **Hundreds of millions of GPS trajectory data** have to be **matched** back to the underlying road network in order to determine the traffic volume pattern on different segments of the road network
- **Irregular GPS sampling intervals** and **gaps** exist for vehicles travelling on the road network derived perhaps from the fixed sampling intervals that can vary between devices

```
b4ba00bd9748981fc74c19afe5bacfc0,0,2015-06-01 10:53:00 000Z,40.1307,-77.0202,,
b4ba00bd9748981fc74c19afe5bacfc0,1,2015-06-01 10:56:00 000Z,40.1172,-77.0374,,
b4ba00bd9748981fc74c19afe5bacfc0,2,2015-06-01 11:01:00 000Z,40.0756,-77.0535,,
b4ba00bd9748981fc74c19afe5bacfc0,3,2015-06-01 11:01:12 000Z,40.0731,-77.0555,,
b4ba00bd9748981fc74c19afe5bacfc0,4,2015-06-01 11:06:00 000Z,40.0111,-77.1013,,
b4ba00bd9748981fc74c19afe5bacfc0,5,2015-06-01 11:11:00 000Z,39.939,-77.143,,
b4ba00bd9748981fc74c19afe5bacfc0,6,2015-06-01 11:16:00 000Z,39.8687,-77.1945,,
b4ba00bd9748981fc74c19afe5bacfc0,7,2015-06-01 11:21:00 000Z,39.7931,-77.2069,,
b4ba00bd9748981fc74c19afe5bacfc0,8,2015-06-01 11:26:00 000Z,39.7467,-77.2745,,
b4ba00bd9748981fc74c19afe5bacfc0,9,2015-06-01 11:29:04 000Z,39.7181,-77.3079,,
```