
My Journey into Data Science

What is Data Science?

Extract Meaning
and Value out of Data



What is Data Science?

Data + Algorithms → Knowledge → Benefits

*Data wrangling
(Pandas, Numpy)*

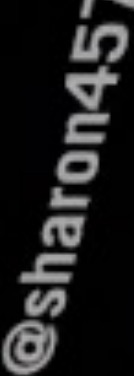
*Machine Learning
(scikit-learn)*

What do you see?



O'Connell Bridge / D'O'lier St. Dublin City CCTV
8 Apr 2013 18:31:50 GMT Daylight Time

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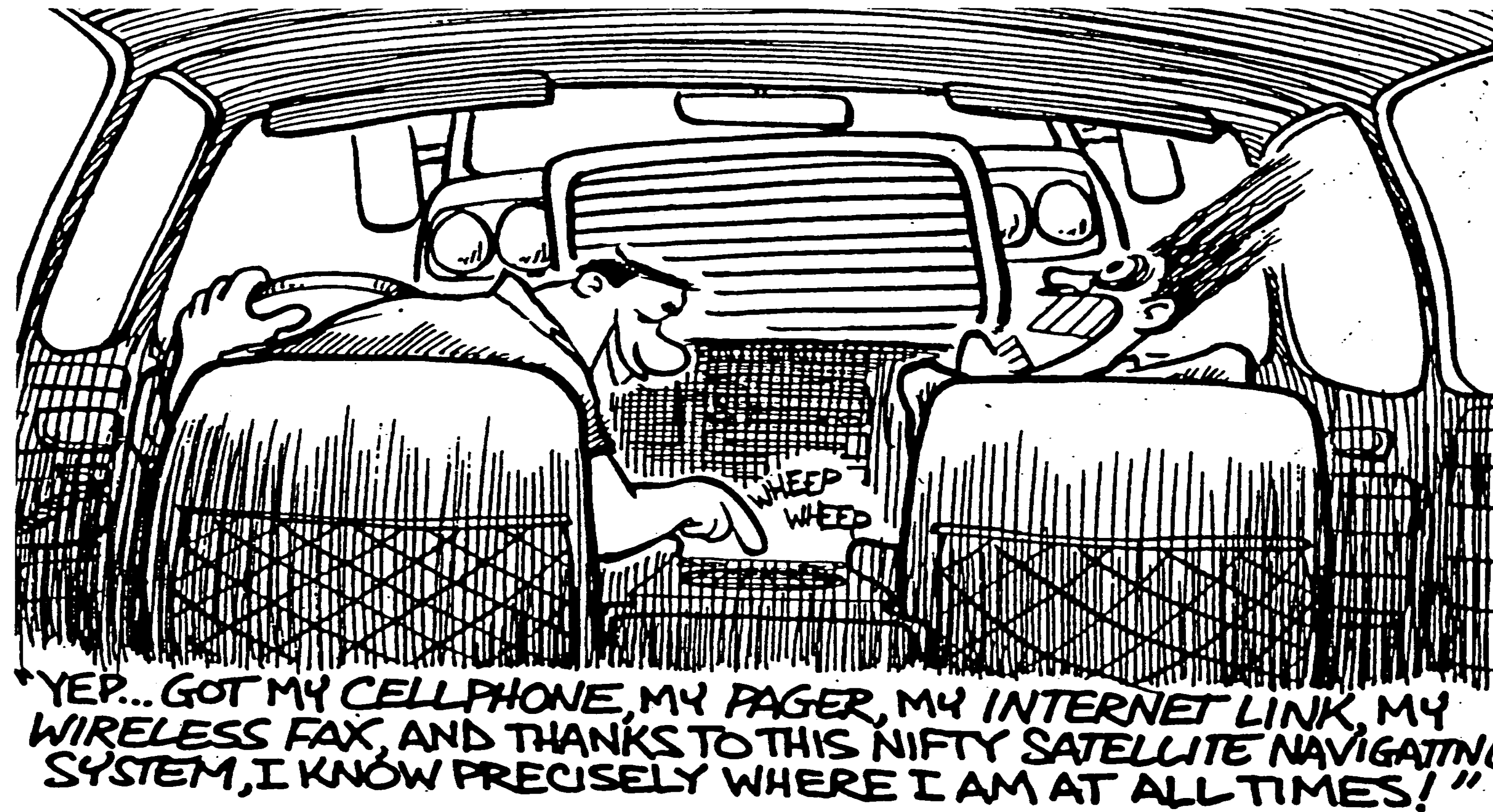


Data is the new oil



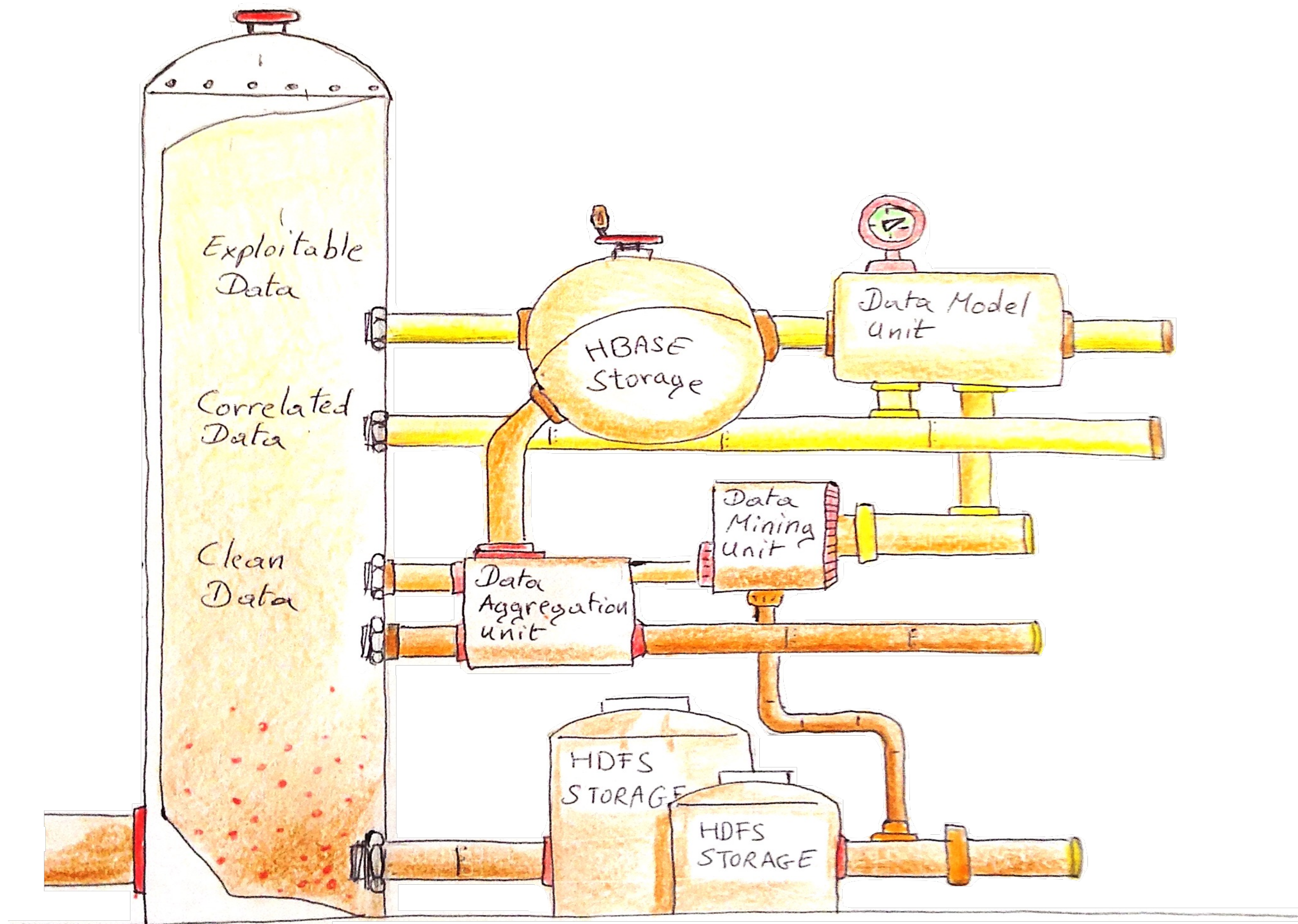
The Economist, May 2017

Big data, Bad data



BY LOWE FOR THE SUN-SENTINEL, FLO

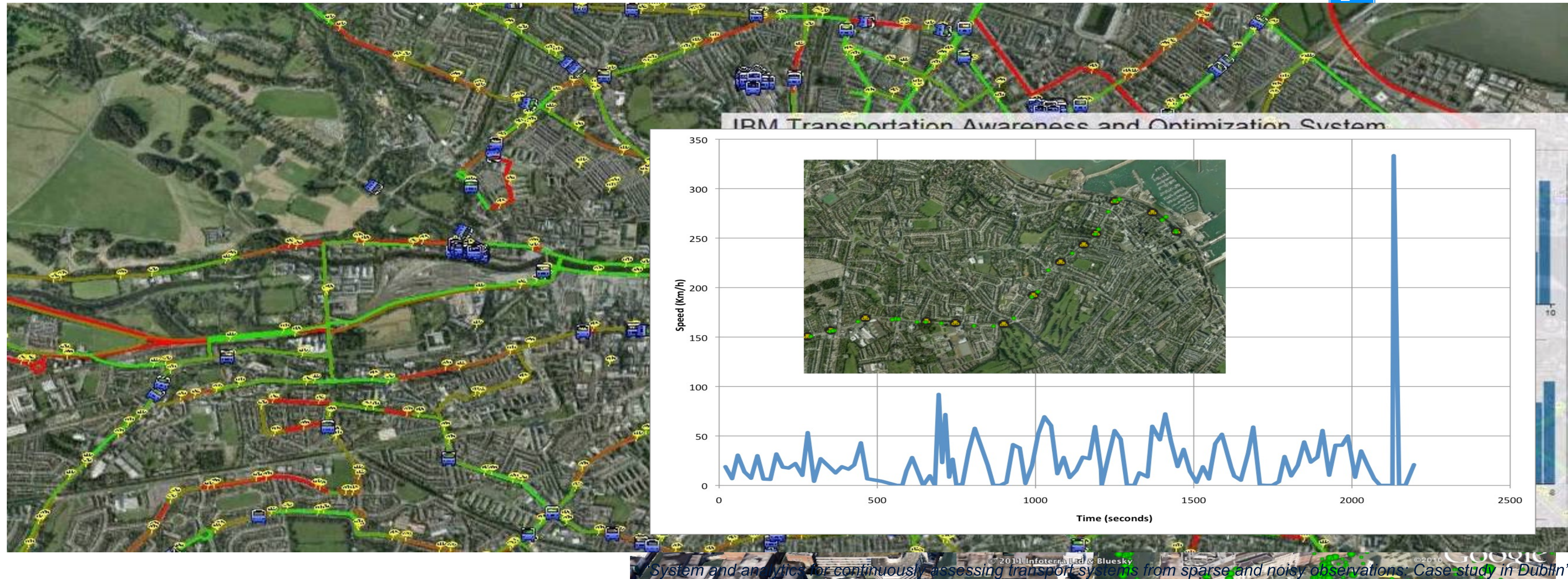
Like oil, data must be refined



From raw data to information

Real-time tool for situational awareness

P



System and analytics for continuously assessing transport systems from sparse and noisy observations: Case study in Dublin
L. Gasparini, E. Bouillet, F. Calabrese, O. Verscheure, IEEE Conference on Intelligent Transport Systems, 2011.

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How can data science improve Urban Mobility?



1. From raw data to information
 - Assimilate complex sensor data
 - Deal with volume, accuracy, diversity
2. From information to models
 - Understand how people move
 - Model and predict demand



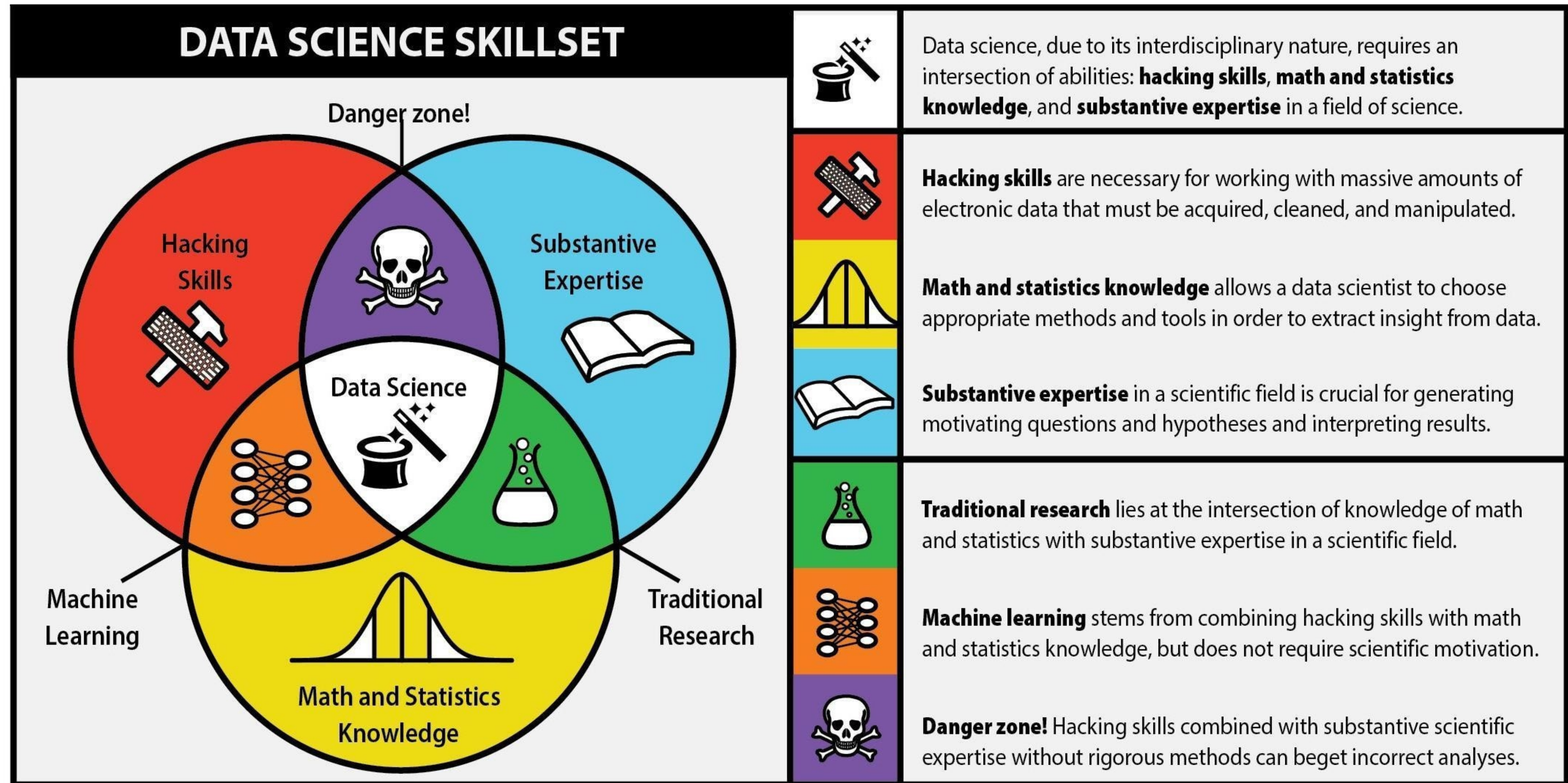
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1. From raw data to information
 - Assimilate complex sensor data
 - Deal with volume, accuracy, diversity
2. From information to models
 - Understand how people move
 - Model and predict demand
3. From models to actions
 - Optimize planning & operations
 - Deal with uncertainty



From Machine Learning to Data Science



What is Data Science?

Domain expertise

*Visualization
(Matplotlib)*

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*Data wrangling
(Pandas, Numpy)*

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QUESTIONS?

