Data Science Association

LineageDB Architecture for Big Data Analytics
&
Top 20 Data Quality Solutions for Data Science

University of Colorado Boulder

December 3, 2014

Data Science Association

Machine Learning Hackathon in March 2014

Goal: Create free mobile phone app for public to use to make best possible ski venue and rout/time decision.

We are holding a Machine Learning Hackathon Planning Committee Meeting on Thursday December 4 at Google Hangout from 9-10pm MST. Contact: michael.walker@datascienceassn.org
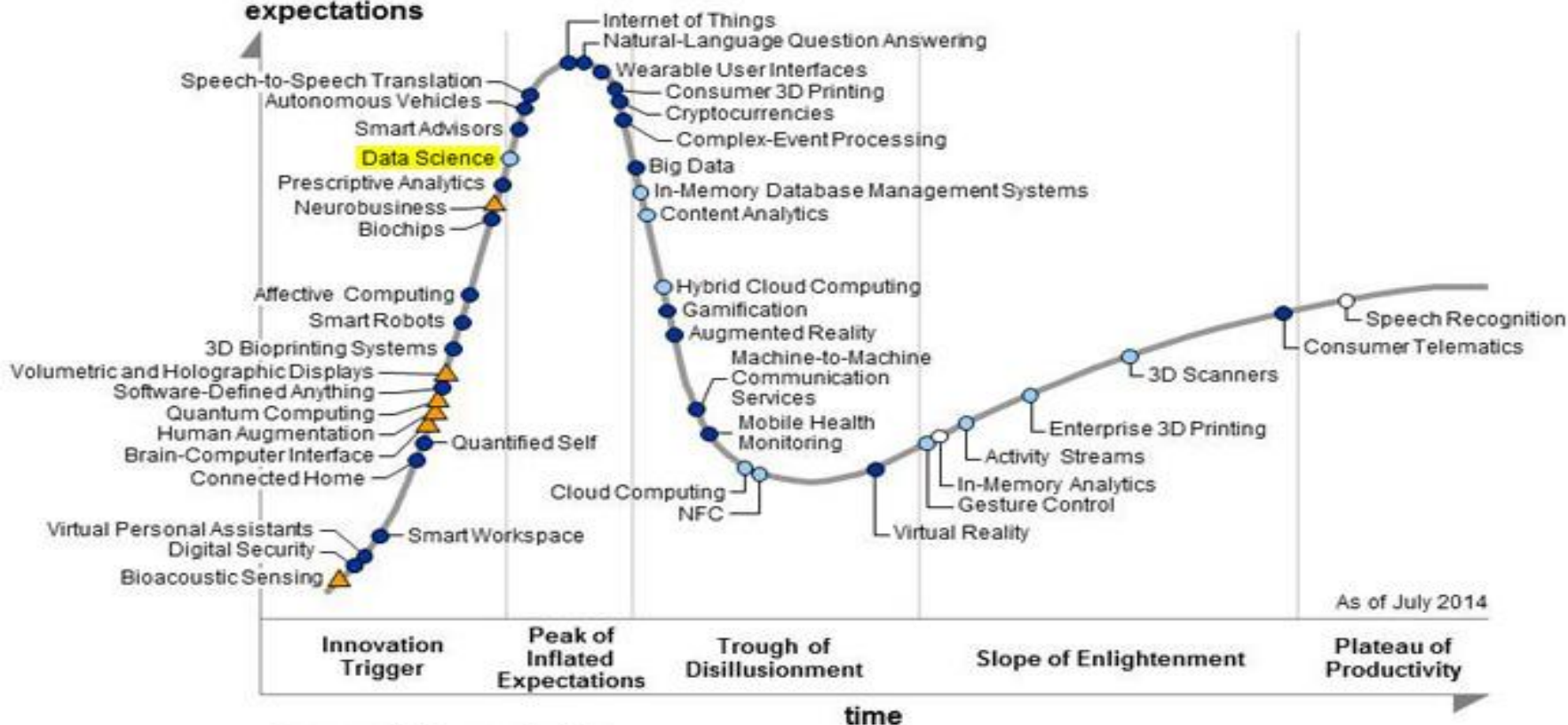
Data Science Association

Professional Practice Partner Platform

Goal: Assist DSA members in building and running an independent professional practice.

Special thanks to Marilyn Waldman - Lead Tech Developer

Need Alpha Testers: Contact - marilyn. waldman@datascienceassn.org

expectations

- Internet of Things
- Natural-Language Question Answering
- Speech-to-Speech Translation
- Wearable User Interfaces
- Autonomous Vehicles
- Consumer 3D Printing
- Smart Advisors
- Cryptocurrencies
- Data Science
- Complex-Event Processing
- Prescriptive Analytics
- Big Data
- Neurobusiness
- In-Memory Database Management Systems
- Biochips
- Content Analytics
- Affective Computing
- Hybrid Cloud Computing
- Smart Robots
- Gamification
- 3D Bioprinting Systems
- Augmented Reality
- Volumetric and Holographic Displays
- Machine-to-Machine Communication Services
- Software-Defined Anything
- Quantum Computing
- Human Augmentation
- Mobile Health Monitoring
- Brain-Computer Interface
- Quantified Self
- Connected Home
- 3D Scanners
- Enterprise 3D Printing
- Speech Recognition
- Consumer Telematics
- Activity Streams
- In-Memory Analytics
- Gesture Control
- Cloud Computing
- NFC
- Virtual Reality
- Virtual Personal Assistants
- Smart Workspace
- Digital Security
- Bioacoustic Sensing

As of July 2014

| Innovation Trigger | Peak of Inflated Expectations | Trough of Disillusionment | Slope of Enlightenment | Plateau of Productivity |

time

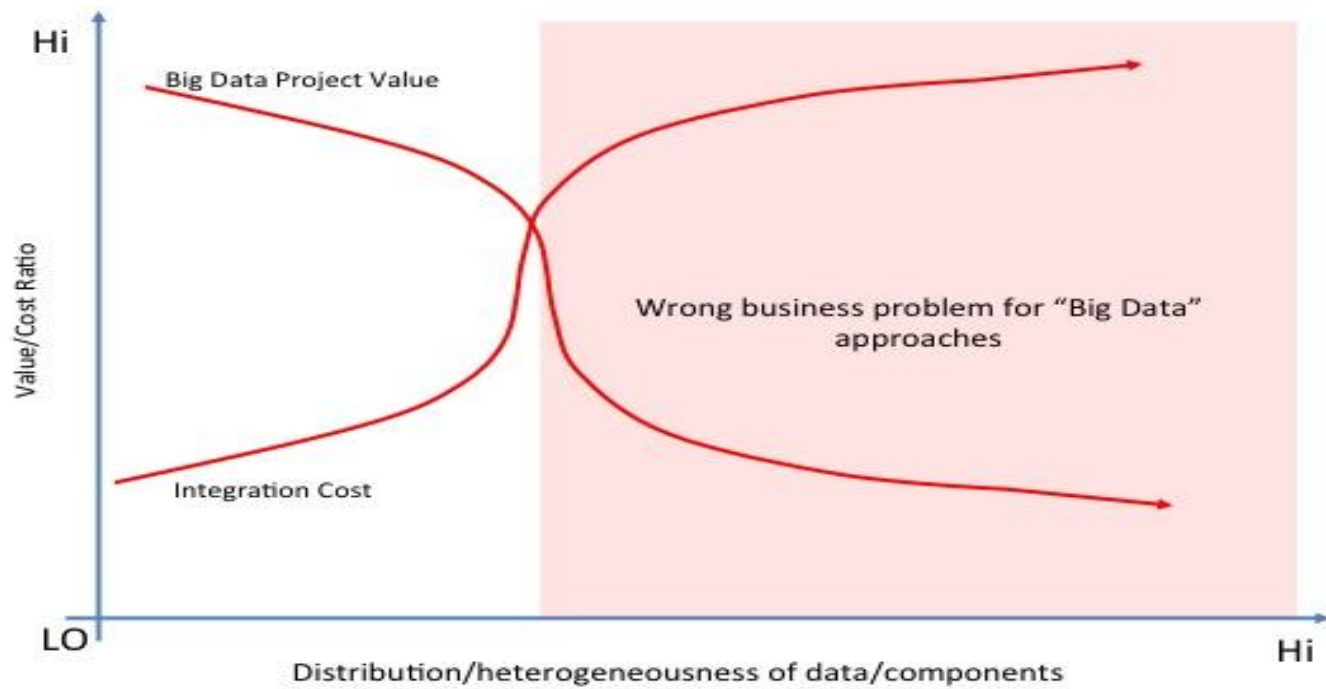Plateau will be reached in:

○ less than 2 years   ◉ 2 to 5 years   ● 5 to 10 years   ▲ more than 10 years   ⊗ obsolete before plateau

Data Science Association

Machine Learning Father Michael Jordan on Delusions of Big Data

See at Data Science News: http://www.datascienceassn.org/data-science-news

Data Science Association

"When you have large amounts of data, your appetite for hypotheses tends to get even larger. And if it's growing faster than the statistical strength of the data, then many of your inferences are likely to be false. They are likely to be white noise."

Data Science Association

"I like to use the analogy of building bridges. If I have no principles, and I build thousands of bridges without any actual science, lots of them will fall down, and great disasters will occur."

Data Science Association

"The main one will be a "big-data winter." After a bubble, when people invested and a lot of companies overpromised without providing serious analysis, it will bust. And soon, in a two- to five-year span, people will say, "The whole big-data thing came and went. It died. It was wrong.""

Data Science Association

"I am predicting that. It's what happens in these cycles when there is too much hype, i.e., assertions not based on an understanding of what the real problems are or on an understanding that solving the problems will take decades, that we will make steady progress but that we haven't had a major leap in technical progress. And then there will be a period during which it will be very hard to get resources to do data analysis. The field will continue to go forward, because it's real, and it's needed. But the backlash will hurt a large number of important projects."

Data Science Association

http://www.datascienceassn.org

Guiding principles:

- **Setting standards for the ethical professional practice of data science.**
- **Assuring base-level data scientist competency.**
- **Advancing data science to serve core values of the scientific method.**
- **Helping to shape a better future - not just for the powerful, but for the majority of people.**

Data Science Association

http://www.datascienceassn.org

Data Science Standards Committee

Seeking members to join us in developing and setting standards for the professional practice of data science.

If you would like to join email Michael Walker: michael. walker@datascienceassn.org.

Data Science Association

http://www.datascienceassn.org

Network at Old Chicago after Event

Giving away free data science books

1102 Pearl St. (western end of Pearl Street pedestrian mall, directly facing Boulder Bookstore).