CREATIVE THINKING AND DATA SCIENCE

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data scope analytics

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WHY HAVE WE NOT SEEN THE TRANSFORMATION CAUSED BY "BIG DATA?"

TOOLS?

PYTHON   HADOOP
Why have we not seen the transformation caused by "big data?"

Talent?
WHY HAVE WE NOT SEEN THE
TRANSFORMATION CAUSED BY
"BIG DATA?"

PROCESS.
Plan

Describe the components of data science

Present an alternative approach

Draw parallels to existing techniques
3 COMPONENTS OF DATA SCIENCE

A broad generalization of the typical approach
3 Components of Data Science

A broad generalization of the typical approach:

[DIAGRAM: DATA → PROBLEM]

Defining the question / identifying a problem / finding an opportunity
3 COMPONENTS OF DATA SCIENCE

A broad generalization of the typical approach

DATA → 1 → 2

PROBLEM → SOLUTION

DETERMINING THE SOLUTION /
DETERMINING THE ANSWER /
FINDING A SOLUTION
3 COMPONENTS OF DATA SCIENCE

A broad generalization of the typical approach

DATA → 1 → 2 → 3

PROBLEM  SOLUTION  INTERFACE

COMMUNICATING THE INSIGHTS /
DESIGNING THE INTERFACE
3 COMPONENTS OF DATA SCIENCE

1. PROBLEM

2. TECHNICAL METHODS

3. INTERFACE

WE`RE OVEREMPHASIZING TECHNOLOGY AND TOOLS
THE HERITAGE HEALTH PRIZE

CREATE AN ALGORITHM THAT PREDICTS HOW MANY DAYS A PATIENT WILL SPEND IN A HOSPITAL IN THE NEXT YEAR.
THE HERITAGE HEALTH PRIZE

DATASCOPE ANALYTICS

DATA FROM WWW.HERITAGEHEALTHPRIZE.COM
THE HERITAGE HEALTH PRIZE

DATA SOURCE: www.heritagehealthprize.com
THE HERITAGE HEALTH PRIZE

![Graph showing a constant value of score over time (in months).]

Data from www.heritagehealthprize.com
THE HERITAGE HEALTH PRIZE

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THE HERITAGE HEALTH PRIZE

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THE HERITAGE HEALTH PRIZE

Score

Time (in months)

ALL ZEROS

CONSTANT VALUE

LAST FEW DIGITS

GOAL

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data from www.heritagehealthprize.com
3 COMPONENTS OF DATA SCIENCE

DATA \rightarrow 1 \rightarrow \text{PROBLEM} \rightarrow 2 \rightarrow 3 \rightarrow \text{INTERFACE}

LAST FEW DIGITS
**How do we change?**

DATA → 1 → 2 → 3

1. Problem
2. Solution
3. Interface
A DIFFERENT APPROACH: DATA-DRIVEN DESIGN

data
data

1. PROBLEM

3. INTERFACE

2. SOLUTION

data
data
data

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A DIFFERENT APPROACH: DATA-DRIVEN DESIGN

Ensures results are communicable
Avoid solving the wrong problem
Encourages more/better data

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A DIFFERENT APPROACH: DATA-DRIVEN DESIGN

CASE STORY

DATA-DRIVEN DESIGN IN E-DISCOVERY
HUMAN CENTERED DESIGN

NEEDS, WANTS, CONSTRAINTS OF USERS ARE ALWAYS AT THE FOREFRONT OF PROCESS
HUMAN CENTERED DESIGN

CASE STORY
A BETTER MOP
WE CAN LEARN FROM DESIGNERS
(AND DESIGNERS CAN LEARN FROM US!)

WE NEED TO STOP OVEREMPHASIZING
THE LAST FEW DIGITS

WE NEED TO REFRAME AND SOLVE
THE RIGHT PROBLEMS TO SEE
A TRANSFORMATION
THANK YOU!

datascopeanalytics.com/what-we-think

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