



**Southern**  
Data Science  
Conference



**Booz  
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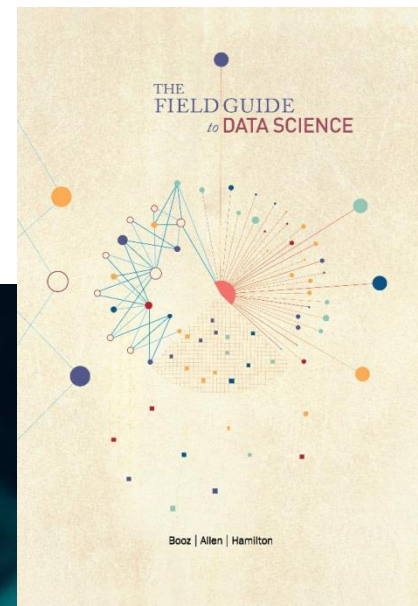
# Top Trends in AI, Machine Learning, and Data Science for 2018

@KirkDBorne

Principal Data Scientist, Booz Allen Hamilton

# The Future of Data Science

...according to a chapter that I wrote in 2015  
for the Booz Allen “Field Guide to Data Science”



## The Future of Data Science

### Algorithms

- Massive-scale Graph Analytics
- Geospatial Temporal Predictive Analytics
- Hyperfast Analytics
- Embedded Deep Learning
- Cognitive Machine Learning
- Natural Language Generation
- Structured Database Generation

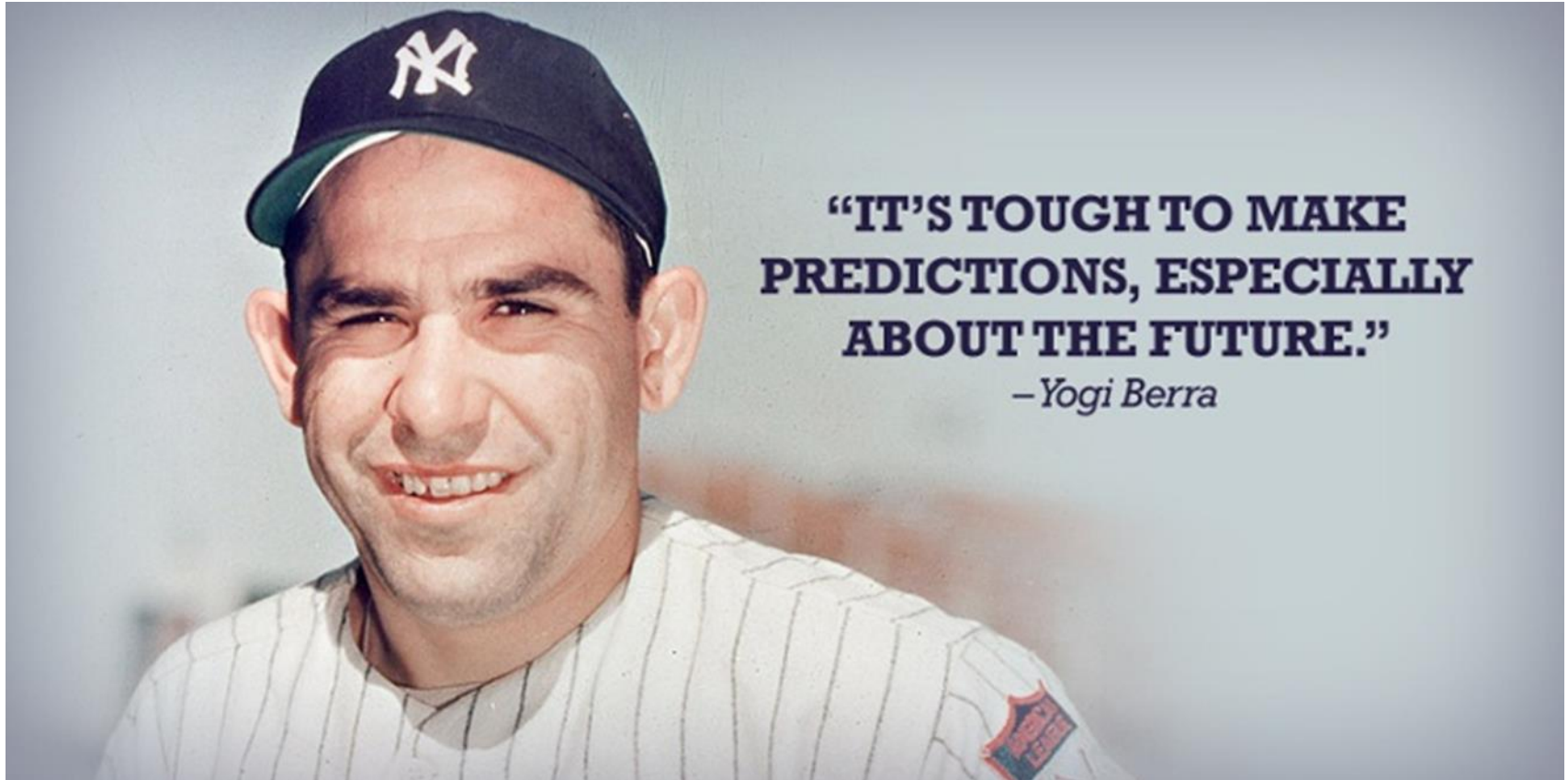
### Applications

- Cybersecurity
- Healthcare
- Internet of Things
- Customer Engagement & Experience
- Smart Everything
- Human Capital
- Data for Societal Good

**#DataSciBowl**

Booz | Allen | Hamilton

Prediction is very difficult...  
... especially if it is about the future!



# We are creating the future of Machine Intelligence, AI, and Data Science at Booz Allen

**“The best way  
to predict  
the future  
is to  
create it.”**

Abraham Lincoln





# Top Ten Trends in 2018 for AI and Machine Learning

- (a) IoT
- (b) Hyper-Personalization
- (c) AI
- (d) Machine Intelligence
- (e) AR

a b c d e f g h j k

- (f) Behavior Analytics
- (g) Graph Analytics
- (h) Journey Sciences
- (j) Experience Economy
- (k) Agile – DataOps



**IoT:** the Internet of Things!  
... The Internet of Everything  
... IIoT, Industry 4.0, Digital Twins  
... The Analytics of Things  
... The Internet of Context  
Welcome to “The Age of Context”



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# Hyper-personalization:

... Location-aware

... Digital exhaust from apps  
and from processes

... Social trails



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**AI:** not only Artificial Intelligence  
... Augmented Intelligence  
... Assisted (Human ↔ Machine)  
... Amplified Intelligence  
... Actionable Intelligence



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# Machine Intelligence:

... Data-to-Action with AI  
... RPA (Robotic Process Automation)  
... bots, chatbots, voice assistants  
... Natural Language Generation  
... Deep Learning (text, audio, video)



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# Augmented Reality:

... in the field, logistics, fast response  
... in training for complex tasks  
... gamification of learning  
... 3-D data/information visualization  
... Digital Twins



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# Behavior Analytics:

... Predictive & Prescriptive  
modeling of human interests,  
intentions, motivations, & actions  
... Marketing, Sales, Cybersecurity



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# Graph Analytics:

... “All the world is a graph”

... Graph Databases, Linked Data, Smart Data!

... Social graph, Activity graph, Product graph,  
Interest graph, Influencer graph, ...

“Connecting the dots that aren’t connected” =  
= Anti-money laundering, Fraud, Root Cause, Attribution

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# Journey Sciences:

... “Data-to-insights” for predictive and prescriptive decision-making, action, and data-storytelling.

... People, Processes, Products

... Decoding the “Entity’s DNA” =  
= Ballistic Trajectory vs. Impulse Forces



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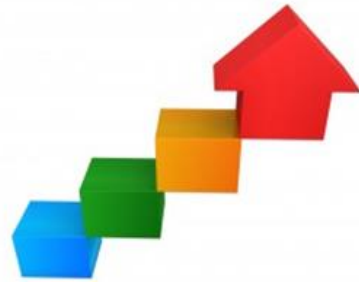
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# The Experience Economy:

... Design thinking for everyone;  
focus on Digital, User, Customer,  
and Employee eXperience  
= DX , UX , CX , EX



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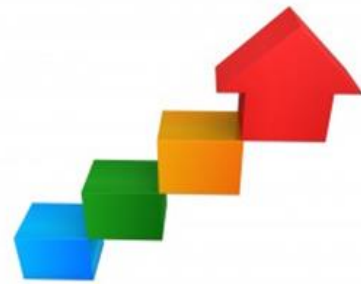


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# Agile – DataOps :

- ... DevOps for Data Analytics
- ... Incremental, Iterative
- ... Build POV (Proof of Value)
- ... MVP (Minimum Viable Product)
- ... Fail-fast and Learn-fast
- ... Culture of Experimentation
- ... The Learning Organization



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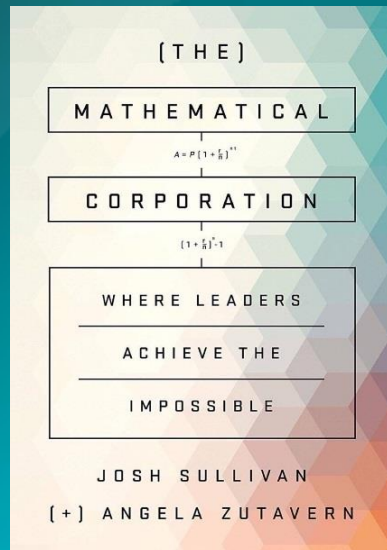
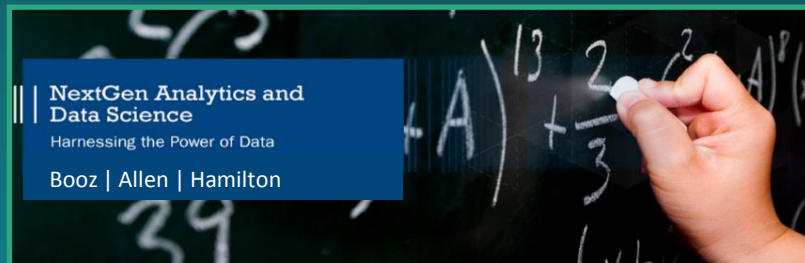
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a b c d e f g h j k



# THANK YOU!

## Let us explore & build a better world together with Data Science!



...Learn how AI and Machine Intelligence empower *The Mathematical Corporation*



### LISTEN

@KirkDBorne  
@BoozDataScience

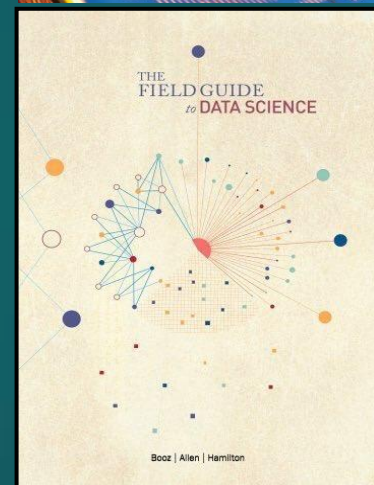
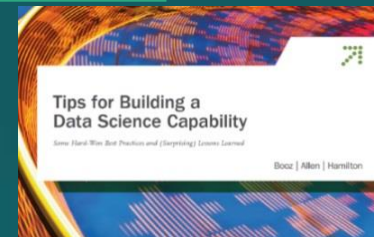
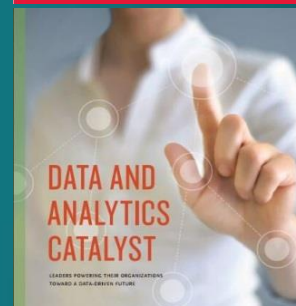
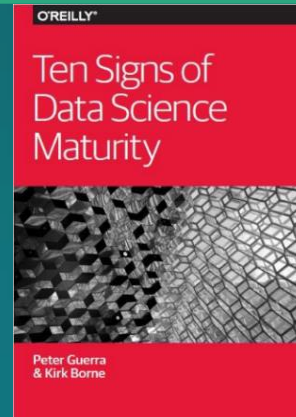
### READ, BUILD, and EXPLORE

[www.boozallen.com/datascience](http://www.boozallen.com/datascience)

- ☐ Tips for Building a Data Science Capability
- ☐ The Mathematical Corporation
- ☐ 10 Signs of Data Science Maturity
- ☐ The Field Guide to Data Science
- ☐ The Data and Analytics Catalyst
- ☐ Explore: [sailfish.boozallen.com](http://sailfish.boozallen.com)

### PARTICIPATE

[datasciencebowl.com](http://datasciencebowl.com)





# Thank you!

The Booz Allen logo, consisting of the words 'Booz' and 'Allen' stacked vertically in a white, sans-serif font, enclosed within a teal-colored rounded square.

**Contact information, for further questions or inquiries:**

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**These slides are here: <http://www.kirkborne.net/SDSC2018/>**