LAK13 Panel: Educational Data Scientists: A Scarce Breed


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6. THERE WILL BE A SHORTAGE OF TALENT NECESSARY FOR ORGANIZATIONS TO TAKE ADVANTAGE OF BIG DATA

Exhibit 4

Demand for deep analytical talent in the United States could be 50 to 60 percent greater than its projected supply by 2018

Supply and demand of deep analytical talent by 2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Graduates with deep analytical talent</th>
<th>Others</th>
<th>2018 supply</th>
<th>Talent gap</th>
<th>2018 projected demand</th>
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<td>2008 employment</td>
<td>150</td>
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<td>2018</td>
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50–60% gap relative to 2018 supply

1 Other supply drivers include attrition (-), immigration (+), and reemploying previously unemployed deep analytical talent (+).

SOURCE: US Bureau of Labor Statistics; US Census; Dun & Bradstreet; company interviews; McKinsey Global Institute analysis
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ABSTRACT

The Educational Data Scientist is currently a poorly understood, rarely sighted breed. Reports vary: some are known to be largely nocturnal, solitary creatures, while others have been reported to display highly social behaviour in broad daylight. What are their primary habits? How do they see the world? What ecological niches do they occupy now, and will predicted seismic shifts transform the landscape in their favour? What survival skills do they need when running into other breeds? Will their numbers grow, and how might they evolve? In this panel, the conference will hear and debate not only broad perspectives on the terrain, but will have been exposed to some real life specimens, and caught glimpses of the future ecosystem.
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LAK13 Panel — Educational Data Scientists: A Scarce Breed
By sbs on March 14th, 2013

At the imminent LAK13 conference, we’re convening a panel to investigate an important challenge for the field - the skills shortage, definition, and career trajectory for data scientists in education. Who?

Third Conference on Learning Analytics and Knowledge
LAK 2013

Over the coming few weeks before LAK13, we want to gauge the community’s thoughts and queries on these issues.

Specifically, we invite your questions to the panel...

Christopher A. Brooks (cab938)
If there is time - what is the one skill as supervisors of the coming generation of educational data scientists that we need to strengthen?

RadHertz
The Educational Data Scientist is connecting node between or among different disciplinary domains, much like medical informaticists. As a result they need to know both the computational skills plus visualisation options, but also enough of the different disciplinary core concepts to advance their analysis as performed through these techniques. In this sense it may distinguish somewhat Xavier’s question in asking the difference between the EDS & an educational researcher:

Xavier Ochoa
What is the difference between the Educational data scientist and the traditional Educational researcher? Is it just a matter of tools or methodologies or there is a deeper difference?
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The Open University in Scotland

Taylor Martin  
Utah State University
We Need More Education Data Scientists

Ryan S.J.d. Baker
Teachers College, Columbia University
Increasing Demand in Industry

• Raise your hand if you’re in industry, and you just hired or are about to hire one!
Increasing Demand in Academia

- North Carolina State just hired two!
- Teachers College Columbia just hired one!
- Tel Aviv just hired one!
- Memphis just hired one!
- Wisconsin just hired one!
- WPI just hired one!
- CMU just interviewed several!
- UC Berkeley just interviewed one!
- Nebraska is recruiting now!
- Utah State might be recruiting next year!
- UC Boulder might be recruiting next year!

- Raise your hand if you’re at a university, and you just hired one or are about to hire one!
Really Amazes Me

• Just compare to two years ago...
Educational Data is Special!

• Not the same as other kinds of data
We need more grad programs specialized in this!

• Learning Analytics @ TC
  – Take a flier, tell your students
• Learning Sciences and Engineering @ CMU
• Learning Sciences and Technologies @ WPI

• Where else? Tell me about it!
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Educational Data Scientists Should be deep-thinking philosophers too.

John T. Behrens
I will show you a picture. As soon as you know what it is, I want you to raise your hand. But do not say anything (no cheating!!)
What is it?

• Is it a duck?
• Is it a rabbit?
• Is it a......?
Another game!
Another game?

Are these words data?
If these words are data...

In what way do we mean it?
Things that make me crazy
“Looks cool. What does it mean?”

“I don’t know”
“Looks great at a high level, how have you explored it and tested the assumptions?”

“What assumptions?”
“What are the relevant background issues in this area?”

“Ask the SME, I’m just the data person”
“Does it really make sense to get that result?”

“I don’t know, it just came out that way”
Be a philosopher
Don’t let your schooling interfere with your education
Question

Assumptions
Thank You!
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Utah State University
Electronic Distance Measurement to Educational Data Mining (EDM to EDM)

Martin Hawksey (@mhawksey)
IBM’s CEO Says Big Data is Like Oil, Enterprises Need Help Extracting the Value

MARIA DEUTSCHER | MARCH 11TH

IBM chief executive officer Ginni Rommetty regards analytics as a new source of competitive advantage for her company’s enterprise clientele.
Luke, view the source...
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Luke, find the feed...

Dr. Tony Hirst
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Questions!