

# Liberal Arts Data Science Workshop

Jan 12-13, 2018

New College  
THE HONORS COLLEGE of Florida

# Social Media

#LADSNCF

**Liberal Arts Data Science**  
**New College of Florida**

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# **Liberal Arts Data Science Workshop #LADSNCF**

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# Computer Science in the Data Science Curriculum #LADSNCF

Panelists: Jessen Havill, Dennis F.X. Mathaisel,  
Julie Medero, Imad Rahal  
Moderator: Gary Kalmanovich

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# Outline

- Couple minute presentations by the panelists on their college's computer science (for data science) curriculum
- Questions posed by the moderator
- Questions posed by the audience

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# Question 1:

- What computer science skills are essential for data scientists?
  - Which languages?
  - Breadth vs Depth?
  - Tools? (Debugger, Git, ...)

## Question 2:

- How do you design a class or classes around the necessary skills?
  - To what degree should classes be true “computer science” classes?
  - Integration with data mining? If integrated, how?
  - Should one favor group vs individual programming assignments?



# Question 3:

- Should a program build up low-level or high-level skills?
  - More focus on design or on implementation?
  - Teach importance of domain knowledge or tools that solve problems?

## Question 4:

- Are more proprietary tools or general purpose tools more important for a data science graduate?
  - Past Python and R,
  - Spend more time on SAS, SPSS, Stata, Matlab, Excel, ...
  - Or on Linux, Git, Java, JavaScript, ...

# Question 5:

- What is a good definition for “Data Science” from a liberal arts perspective?
  - Does this definition differ among involved disciplines (CS, STATS, etc.)
  - For Computer Science, how does Data Science differ from its predecessors like Machine Learning and Data Mining?

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# Questions (Extra):

- Prerequisites for a CS in DS class?
  - Linear Algebra; Calculus; Probability; ...
- Toy projects vs real projects?
  - MNIST vs student's proposed choice
- Has the general CS curriculum changed because of DS
- Any changes on the horizon?