



Developing Tomorrow's Workforce Today

AI Panel



www.ictc-ctic.ca

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Rob Davidson

- Manager Data Analytics and Research, ICTC
- Open Data Institute Ottawa Node Founder
- Data for Good Ottawa acting chair
- Canadian Multi-stakeholder Forum co-chair,
Open Government Partnership

THE DATA SCIENCE HIERARCHY OF NEEDS

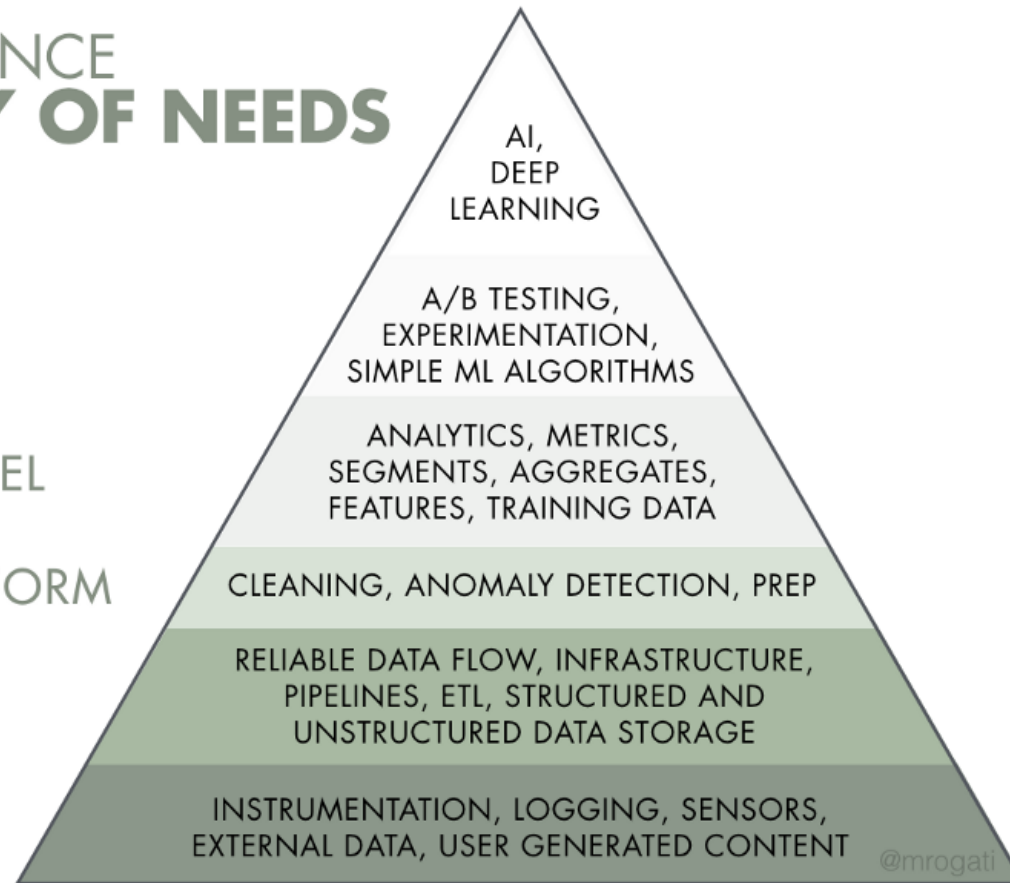
LEARN/OPTIMIZE

AGGREGATE/LABEL

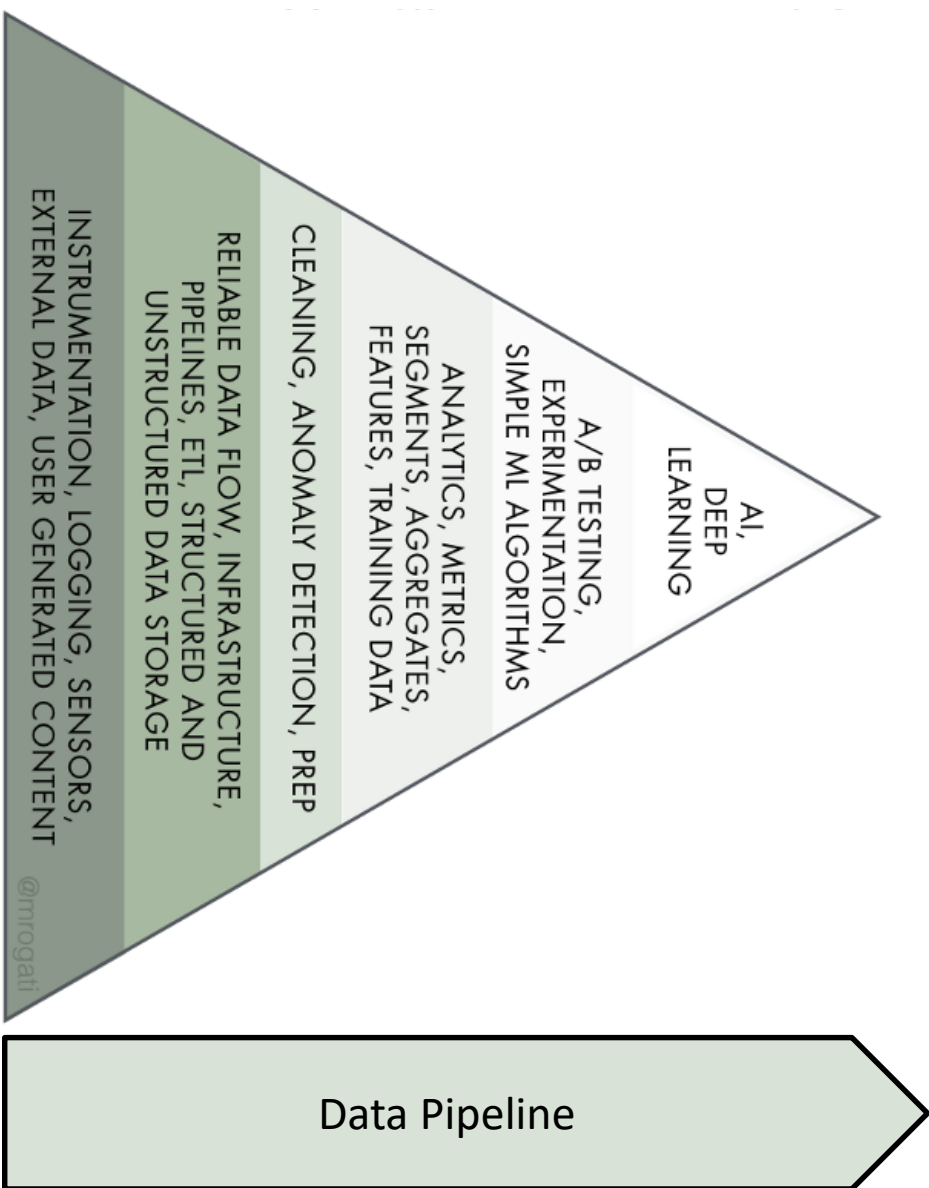
EXPLORE/TRANSFORM

MOVE/STORE

COLLECT

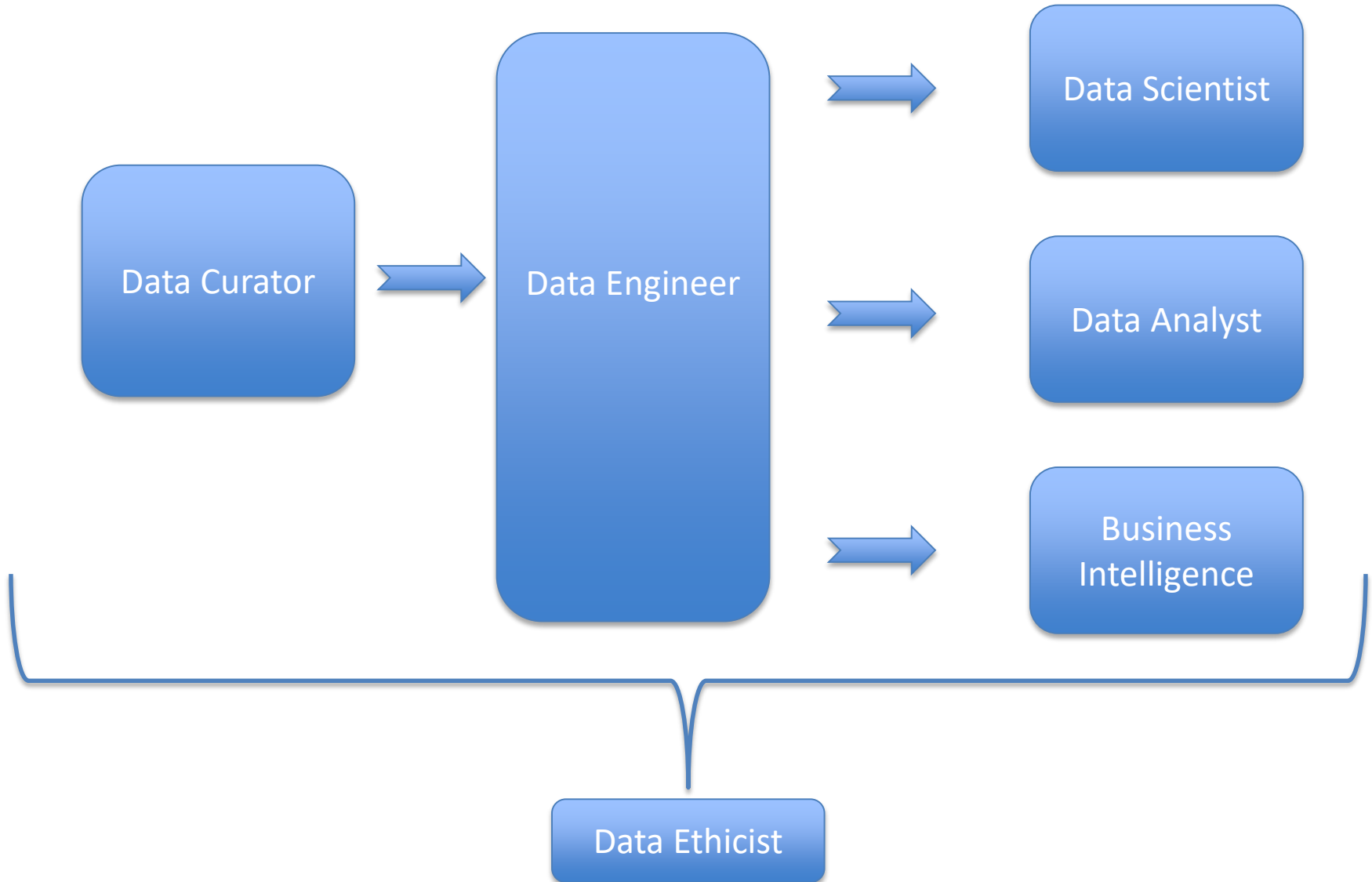


Source: Monica Rogati (@mrogati), “aipyramid.com”, Aug 2017.



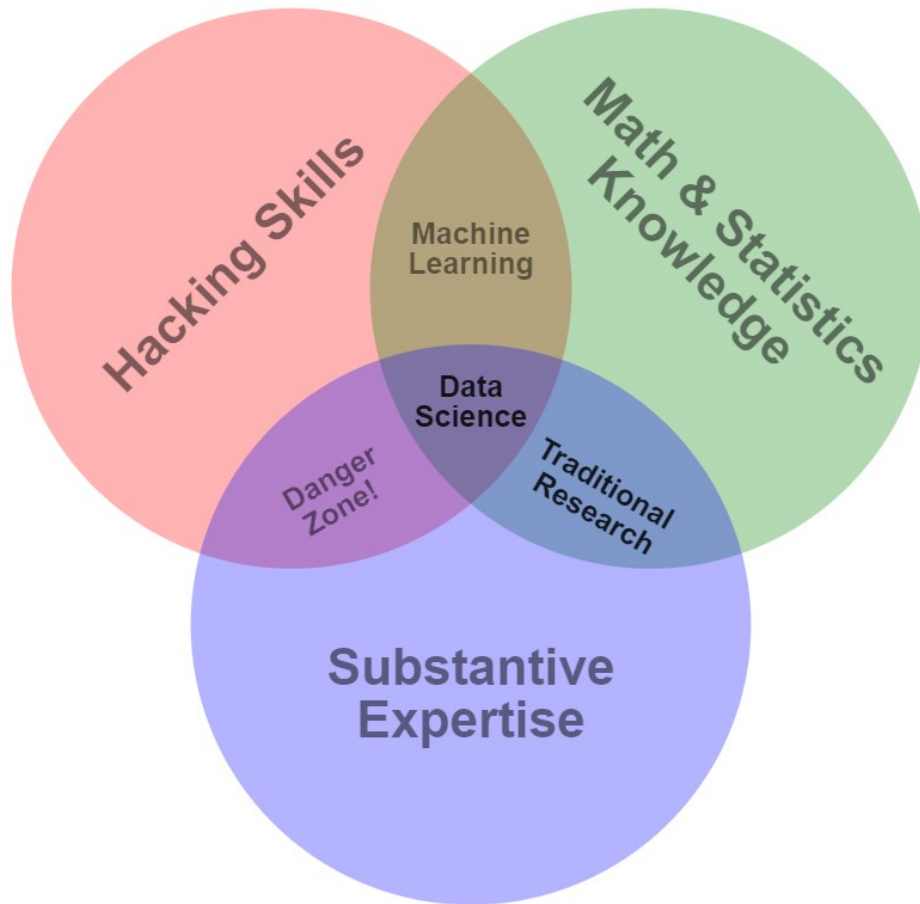
Source: Monica Rogati (@mrogati), “aipyramid.com”, Aug 2017.

Data Roles by Data Pipeline



The Drew Conway Venn Diagram

The Data Science Venn Diagram



[Created by Drew Conway, 2010](#)

Who is a Data Scientist?

Is it defined by:

- An academic / professional designation?
- The skills you have?
- The role required?



Source: CNBC, https://www.cnbc.com/2018/08/16/15-companies-that-no-longer-require-employees-to-have-a-college-degree.html?__source=facebook%7Cmain

Hard Skills
Python
SQL
Excel
Machine Learning
Tensorflow
Tableau
SAS
AWS
AI
Matlab

Source: ICTC, April 2019

Stuff

Pan-Canadian AI Strategy:

- Vector Institute funding cut by Ontario government
- Alberta places \$100 million investment in AI on hold

"The Canadian government has in fact been funding AI (artificial intelligence) research for over three decades..."

The problem is that it all it went to foreign multinationals who now charge Canada for the use of technology that our taxpayers paid for." Jim Balsillie

Source: Christopher Reynolds, Canadian Press, ["Canada Needs to Commercialize AI, not just do Research"](#), Feb 2019.