

2018 Outlook

Machine Learning and Artificial Intelligence

A survey of 1600+ data professionals

January 2018

Survey Conducted By O'Reilly Media, Inc.

2018 Outlook: Machine Learning and Artificial Intelligence

Exploring the impact ML/AI has on digital business transformations

MemSQL commissioned a survey with O'Reilly Media to learn more about the adoption of artificial intelligence (AI) and machine learning (ML) in the workplace. According to the survey of over 1,600 respondents, 61 percent of respondents, regardless of company size, indicated ML and AI as their companies' most significant data initiative for next year, when asked to pick from several options likely to be important concerns in today's climate. With big data and business analytics initiatives coming in at a close second (58 percent).

Additional Key Survey Findings

- 65 percent respondents using and planning to use ML/AI cited that a key aspect of adopting ML and AI was to enable more informed business decision making, underscoring the importance of these technologies for analytics.
- 74 percent of all respondents consider ML and AI to be a game changer, indicating it had the potential to transform their job and industry.
- Of those indicating they actively use ML and AI, 58 percent indicated they ran models in production.
- The findings also suggest that uses of such technologies are evolving rapidly, with 77 percent of respondents actively using ML/AI indicating that creating new models was part of their short-term goals.

Machine Learning and Artificial Intelligence Top Initiative

Top Data Initiatives for 2018

Machine learning / Artificial intelligence								
Big data	/ Business analy	tics						
Data sec	curity and compl	iance						
Internet of Things								
Managir	ig data growth							
Migratir	g legacy systems	5						
	Data center consolidation							
0%	10%	20%	30%	40%	50%	60%		
n=1589								

- 962 respondents (61%) most frequently picked Machine Learning / Artificial Intelligence as their company's most significant data initiative for next year.
- 919 respondents (58%) selected Big Data / Business Analytics as their company's most significant data initiative for next year.
- 1589 people responded to this question.

ML/AI is a Game Changer

Benefit of ML/AI in the Workplace

Its pot	Its potential for transforming my job / industry										
	It can increase team efficiency										
	It can reduce demand on me / my team										
0%	10%	20%	30%	40%	50%	60%	70%				
n=1624											

- 1198 respondents (74%) considered ML/AI to be a gamechanger, indicating it had the potential to transform their job/industry.
- 1624 people responded to this question.

ML and AI in Production Today

Use of ML/AI in Production Today

Yes									
Not yet, but we plan to									
No and no plan to do so									
0%	10%	20%	30%	40%					
n=1624									

- 1421 respondents (88%) are part of organizations that already use or expect to use ML/AI.
- 1624 people responded to this question.

Current Use Cases of ML/AI

To run ML / AI models in production									
To test M	L / AI solutions								
To evaluate vendors for ML / AI trials									
other									
0%	10%	20%	30%	40%	50%				
n=739									

- Of those actively using ML/AI, 431 respondents (58%) indicated they ran models in production.
- 739 people responded to this question.

Short-term ML/AI Goals

Creatin	ng new moo	dels						
Furthe	er applying e	existing mode	els					
Suppo	rt continuo	us ML scorir	g					
0%	10%	20%	30%	40%	50%	60%	70%	80%

- 77% of respondents indicated creating new models was part of their short-term goals in using ML/AI.
- 739 people responded to this question.

Implementation Plans for ML/AI

One	year+							
7-12	months							
[4-6 m	nonths							
0-3 m	nonths							
0%	5%	10%	15%	20%	25%	30%	35%	40%
n=682								

- 279 respondents (41%) indicated implementation of ML/AI is a year or more down the line.
- 682 people responded to this question.

ML/AI Will Complement Jobs

ML/AI Role within my organization

Comp	lementing my	job					
Makin	g it easier to d	o my job					
F	Reducing my jo	b					
Mak	king it harder t	o do my job					
0%	10%	20%	30%	40%	50%	60%	70%
n=682							

• 682 people responded to this question.

Primary Goals for ML/AI

Have m	nore informed b	ousiness decisio	on making						
Reduce operational costs and improve efficiency									
	e sales by impr tter customer :		omer experienc	se .					
	Reduce heado	count							
0% n=682	10%	20%	30%	40%	50%	60%	70%		

- Of those using ML/AI, 648 respondents (95%) thought it would either complement or make it easier to do their job (as opposed to reducing their job or making things harder for them).
- 682 people responded to this question.

ML/AI Critical for Changing Operations

Role of ML/AI on Transforming Organizations

It will be o	It will be critical to changing core operations									
It will help	o with development ar	nd testing								
It does no	ot have a role									
0%	10%	20%	30%	40%						
n=682										

- Of the respondents using ML/AI, 313 respondents (46%) said the technology would be critical to changing core operations at their organization.
- 682 people responded to this question.

Lack of Skilled Workers

Inhibitors to Implementing ML/AI

Lack of skilled programmers and data scientists									
Other,	higher prior	rities							
Siloed	information								
No nee	d								
Insuffic	cient data								
0%	5%	10%	15%	20%	25%	30%	35%	40%	
n=885									

- According to 347 respondents (39%), it is a lack of talent that most impedes their organizations from using ML/AI.
- 885 people responded to this question.

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Show and Tell for Awareness

Cultivating Support for ML/AI

I creat	e awareness of	f new technolog	gy options amo	ongst peers			
l imple	ment new tec	hnology and she	owcase work a	cross the comp	any		
None	of these apply	to me					
Iwork	with team lead	ds to test new t	echnology				
0%	5%	10%	15%	20%	25%	30%	35%
n=1624							

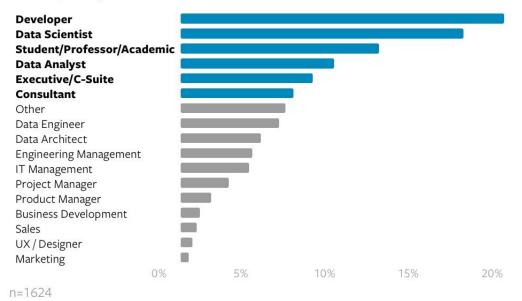
- 1275 respondents (79%) acknowledged they garner support for ML/AI at their company by creating awareness of it, implementing new technologies, or working with team leads.
- 1624 people responded to this question.

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Appendix

- There were 1624 respondents to this survey.
- 883 respondents (54%) indicated they were Developers, Data Scientists, Data Analysts, or in Academia.
- More than 70% of respondents were from companies with less than 250 employees, or over 1000 employees.

Company Role



- 1274 respondents (78%) reported belonging either to companies with 1 to 250 employees ('small company') or over 1000 employees ('large company').
- 1624 people responded to this question.