Explain Yourself, AI
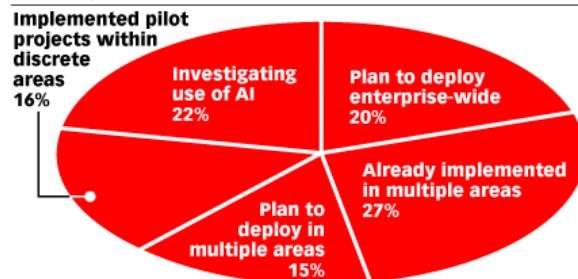
As use of AI grows (27% of executives in a PwC study have already implemented AI), so do calls for ways to interpret how AI models make decisions. This has given rise to a new buzzword: explainable AI, which refers to algorithms that make decisions humans can explain. PwC, for example, says it "integrates risk mitigation and ethical concerns into algorithms and data sets from the start."

How Far Along Are US Executives in Deploying AI?
% of respondents, 2018

- Investigating use of AI 22%
- Plan to deploy enterprise-wide 20%
- Already implemented in multiple areas 27%
- Plan to deploy in multiple areas 15%
- Implemented pilot projects within discrete areas 16%

Note: n=633 at companies that are investigating or implementing AI
Source: PwC, "2019 AI Predictions: Six AI Priorities You Can't Afford to Ignore," Dec 1, 2018

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Sixty-one percent of executives surveyed by PwC said creating transparent, explainable, provable AI methods was a step they planned to take in 2019.

Krishna Gade, a former engineering manager of Facebook's News Feed, and Amit Paka, who worked on Samsung's shopping apps, saw
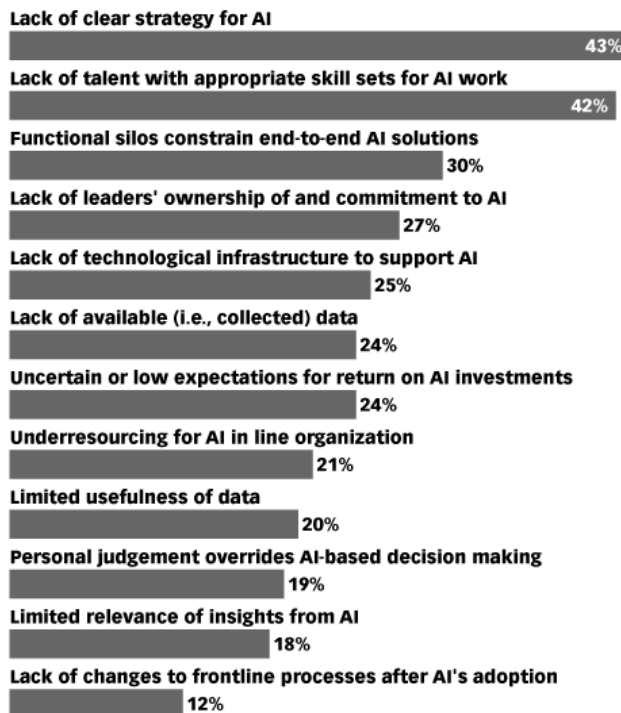
a need for a platform that could clearly explain to company shareholders how AI models make decisions. They founded Fiddler Labs to do just that.

Samsung used machine-learning systems to recommend products to users, but it was difficult to measure return on investment and compare new models to older ones, Paka told CNBC. At Facebook, Gade's challenge was measuring how well the News Feed was working on any given day. "We needed to build tools and platforms to unlock this thing and provide those insights to an engineer all the way to an executive within Facebook," he said.

A February 2018 survey from McKinsey & Co. indicates that the new company is on to something. Of the 1,646 professionals surveyed, 24% thought that uncertain or low expectations for return on AI investment were significant barriers to their organization's adoption of AI.

What Do Professionals Worldwide See as the Most Significant Barriers Organizations Face in Adopting AI?
% of respondents, Feb 2018

Lack of clear strategy for AI
43%

Lack of talent with appropriate skill sets for AI work
42%

Functional silos constrain end-to-end AI solutions
30%

Lack of leaders' ownership of and commitment to AI
27%

Lack of technological infrastructure to support AI
25%

Lack of available (i.e., collected) data
24%

Uncertain or low expectations for return on AI investments
24%

Underresourcing for AI in line organization
21%

Limited usefulness of data
20%

Personal judgement overrides AI-based decision making
19%

Limited relevance of insights from AI
18%

Lack of changes to frontline processes after AI's adoption
12%

Note: n=1,646 whose organization has piloted or embedded AI in at least 1 function or business unit; responses of "other" or "don't know/not applicable" not shown
Source: McKinsey & Company, "AI Adoption Advances, but Foundational Barriers Remain," Nov 13, 2018

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The arrival of the European Union's General Data Protection Regulation (GDPR) further complicates things. Article 22 of the regulation maintains that Europeans have a right to know how an automated decision involving them was reached, and the right to know if and how an automated process is using their personal information.

"You have to start thinking about, 'How do I deploy AI knowingly, giving it ownership of data rights and make sure it's compliant with rules and regulations?'" said Ganesh Padmanabhan, vice president and head of marketing and business development at Cognitive Scale.

Not knowing could be a costly mistake. The PwC report found that 34% of executives surveyed were concerned about the new liabilities AI presented, and 37% said ensuring AI systems were trustworthy was their top priority.

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