

Artificial Intelligence in the Pharmaceutical Industry

<https://marketpublishers.com/r/AB29FC2EB60EN.html>

Date: October 2017

Pages: 0

Price: US\$ 695.00 (Single User License)

ID: AB29FC2EB60EN

Abstracts

Artificial Intelligence (AI) can positively disrupt many of pharma's business areas and processes. From smarter drug candidate identification and repurposing older products to faster clinical trial recruitment and improved clinician/patient education and support. But pharma remains dangerously behind the AI curve and advocates say the time is now for pharma to get on board with the investment and organisational changes that will see AI deliver real productivity gains

But before pharma can embrace this technology, it will need to make some big decisions on how it will implement AI, which vendors it should it work with, what data it needs and how will it use the results to drive quantitative decision making that is trusted. There is a lot of AI hype – but the real opportunities are identified in this compelling expert report.

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Why this report is important to you

What the report will enable you to do

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Why this report is important to you

AI is coming of age and transforming many industrial sectors (think of the impact of driverless cars in the automotive industry). But many pharma companies have yet to fully embrace the latest AI technology/techniques or, worse, see AI as a critical capability for their organisation in the long term. But they need to. With costs rising and

pressure on prices, pharma must be smarter about how it conducts its business — and AI might just be key in resolving the industry's many challenges. This report reveals the insights of AI experts who combine a deep knowledge of the pharma industry with a realistic and practical perspective on where the AI wins are for the industry now and in the future.

This report will enable you to

Understand how AI can be used to streamline and improve the drug discovery process

Breathe new life into old products or failed late stage compounds by using AI to identify potential new indications

Apply AI for profiling patients to better identify clinical trial participant prospects

Appreciate the current AI and ML technology challenges and limitations and why trusting the 'black box' is such a big issue

Use AI in the clinic to support HCPs and patients – could this be a boost to your 'beyond the pill' support programmes?

Assess AI start-ups who are driving the AI service agenda to pharma, such as Atomwise, Benevolent Bio, Berg Health, Cloud Pharmaceuticals, Deep Genomics, EchoBox, Numerate, Seldon, twoXAR, WuXi and NextCODE

Expert Artificial Intelligence Contributors

The report is informed by the front-line knowledge of US/EU AI experts who work in leading innovator companies such as Cloud Pharmaceuticals, Benevolent Bio and Kadmon Group.

AI in pharma

Key insights

What is artificial intelligence and machine learning?

AI/ML technologies have been around since the 1950s so why the hype now?

Critical mass of data, exponential growth in computing power and cloud computing

Perceived benefits of AI by management

Accelerating the drug discovery process

No 'one size fits all' modality or solution

In house expertise versus external contractors

Application of AI by pharma

Key insights

AI applications across the whole of the pharma R&D and supply chain

Designing smarter drugs, quickly

Repurposing discarded drugs

Streamline clinical trials, design, recruitment and biomarker discovery

Enhance clinical decision making and patient engagement

Remote monitoring wearables and smart connected devices

Medication adherence and patient centricity

Market access

Competitive landscape

Key insights

Pharma impact

Pharma market activity in digital technologies and AI

Leading institutes in AI

Leading companies

Recent partnerships & collaborations

Key challenges for pharma to adopt AI drive approach

Key insights

Cultural change - new blood, new business strategies

Trusting the black box

Messy data - data curation and bias

Data sharing

Infrastructure and software challenges

How will AI affect the future of the pharma industry?

Accountability - social, ethical and legal issues

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