



Machine Learning & Artificial Intelligence: Investment Management

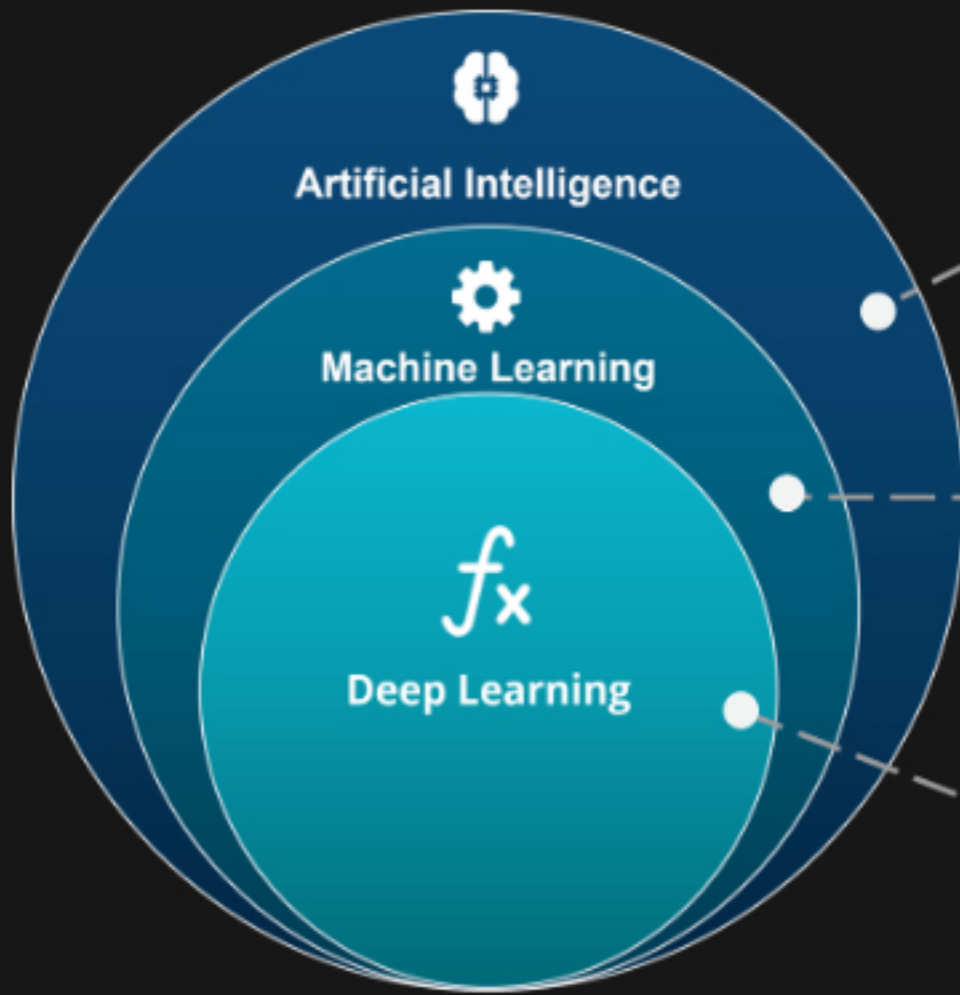


Looking to the future

HSE SPB
Darina Veryaskina BEC 192

○ What is AI and ML?

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ARTIFICIAL INTELLIGENCE

A technique which enables machines to mimic human behaviour

MACHINE LEARNING

Subset of AI technique which use statistical methods to enable machines to improve with experience

DEEP LEARNING

Subset of ML which make the computation of multi-layer neural network feasible

Already introduced



ALTERNATIVE DATASETS

analyzing alternative data to structure hedging strategies



SMART BETA PORTFOLIOS

sustainable dividends or low volatility



AUTOMATED INSIGHT

reading earnings transcripts to assess management sentiments



RELATIONSHIP MAPPING

nonintuitive relationships between securities and market indicators



CLIENT OUTREACH

and demand generation via analytics



POWERING RISK PERFORMANCE

monitor for suspicious transactions, trigger response protocols



EMPLOYEE INSIGHTS

employee morale, top-managers integrity

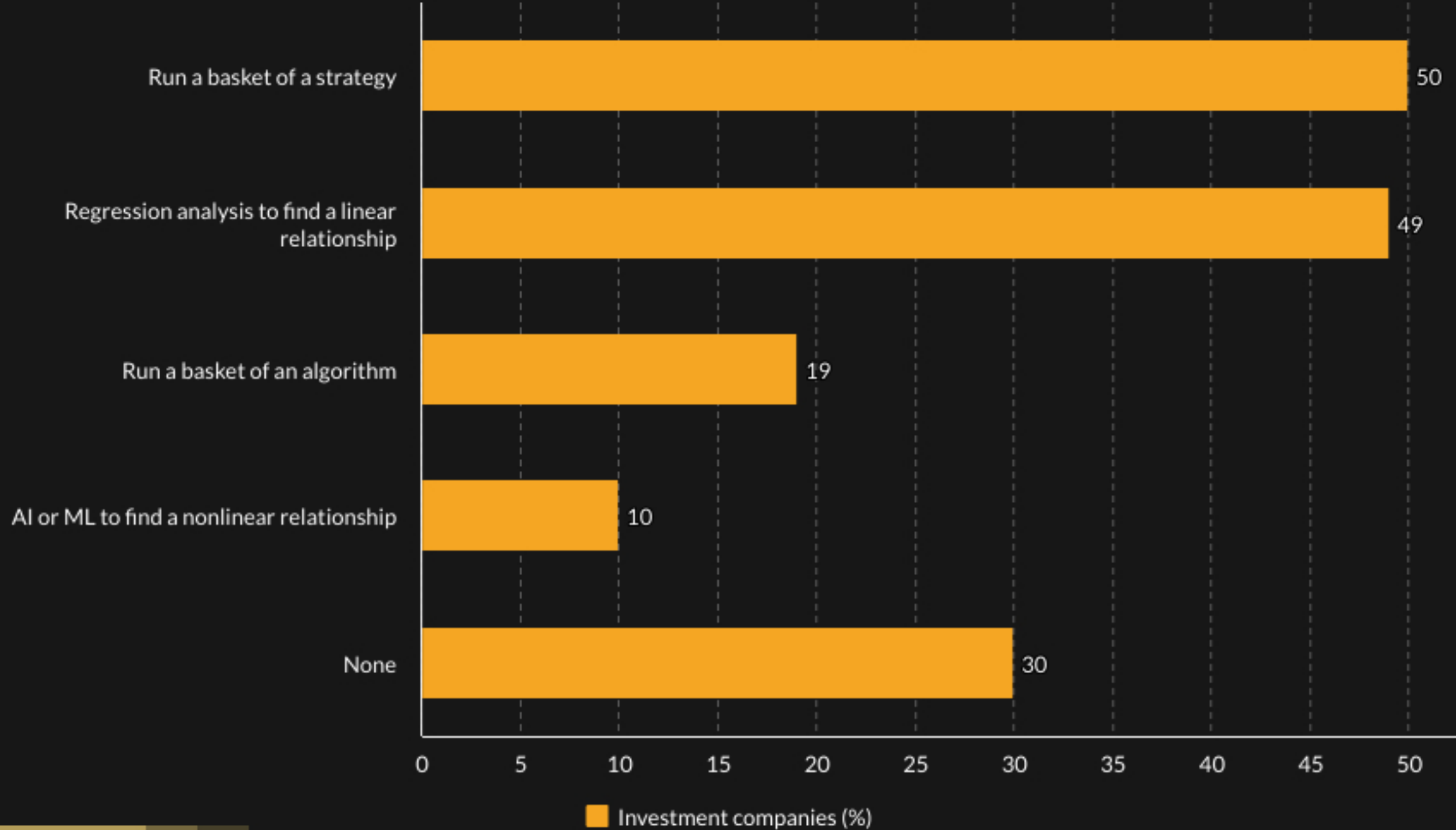


REPORTING AND SERVICING

natural language processing for papers and on-demand reporting



AI and ML implementation





Four pillars for transformation

Latest trends



Generating alpha



**Product And Content
Distribution**



**Enhancing Operational
Efficiency**



Managing risk



Benefits

Include a quick description of what your company does here

✓ **Accurate predictions on asset prices**

✓ **Algorithmic trading development**

✓ **Accuracy**

✓ **Scalability**

✓ **Efficiency**

✓ **Minimized transaction costs**

○ ○ ○ ○ ○ A new class of risks and challenges

DATA MANAGEMENT

Data assortment, architecture, governance

POTENTIAL SURPRISES

AI tools can fail when exposed to outliers

WINNER TAKES IT ALL

Early movers have competitive advantage

OPAQUE RESULTS

Complex models lead to difficulties in interpretation

OVERFITTING

Cannot know how well our model will perform on new data until testing it

COST

Significant upfront cost as well as ongoing maintenance costs



Our Strategy

Point 1

Take courses in furtherance of developing:

- data analytics
- programing
- model-writing

skills

Aim: 1. understand the process
2. be sought after

Point 2

Develop predictive power
to devise market-beating
trading strategies
and be able to overcome
some false statements
of the programs

Point 3

- Storytelling
- Communicating skills
- Explanation of the results



WE
ARE
HUMAN





"Any sufficiently advanced technology is indistinguishable from magic"

● Charles Clark



Thank You

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dsveryaskina@edu.hse.ru

