



Reinventing the new Industrialisation standards...



www.ipo-sg.com

freedom to achieve more



Transforming daily repetitive and mundane tasks into automated processes
Reinventing the new Industrialisation standards...

www.ipo-sg.com

freedom to achieve more



freedom to achive more

Free-up valuable
resource to regain
control and flexibility



freedom to achive more



Digitalization 4.0

AI & Machine Learning

Samuel Ng – Principal Consultant

www.ipo-sg.com

freedom to achieve more



Foreword

“ The core currency of any business going forward will be the ability to convert their data into AI that drives competitive advantages. (...) We are uniquely positioned to take this AI capability and democratize it , so that every developer can be an AI Developer and every company can be an AI company.”

Satya Nadella, CEO of Microsoft



Forms over data

- Reactive
- Fragmented and sliced data
- Users adjust to software

Main Objective

- Record business process

AI over data

- Predictive/Suggestive
- Cloud Data Storage
- Software adapt to Users

Main Objective

- How is my business?



Analyse

Analyse

Transform data into meaningful information and decisions and give evidence-based recommendations



Automate

Automate

Enable effective and cost efficient operations by letting the system perform routine tasks in the end-to-end business process model



Augment

Augment

Augment people capabilities as well as the effectiveness of the organization as a whole



AI in IPO Platform



Analyse

Time Series

- Inventory & Sales Forecast
- Cashflow Forecast
- Time Series API



Automate

Image Analysing

- Item Image Analyzer
- Contact Photo Analyzer
- Custom Vision API



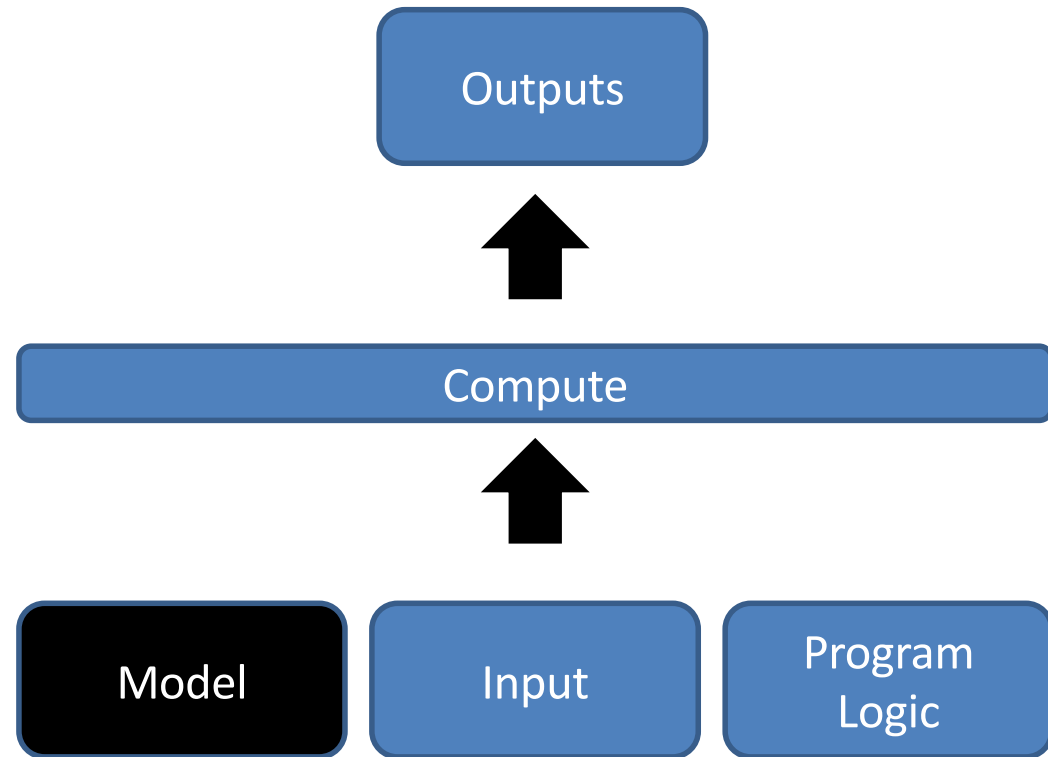
Augment

Classification

- Late Payment Prediction
- Classification API



The fundamentals of “AI” Oriented Application Architecture





Rules:

- Vessel Name
- IMO Number
- Captain Name
- Port of Call
- Transaction Type
- Item / Product Category
- Unit of Measure
- Vendor/Customer
- Pricing
- Quantity



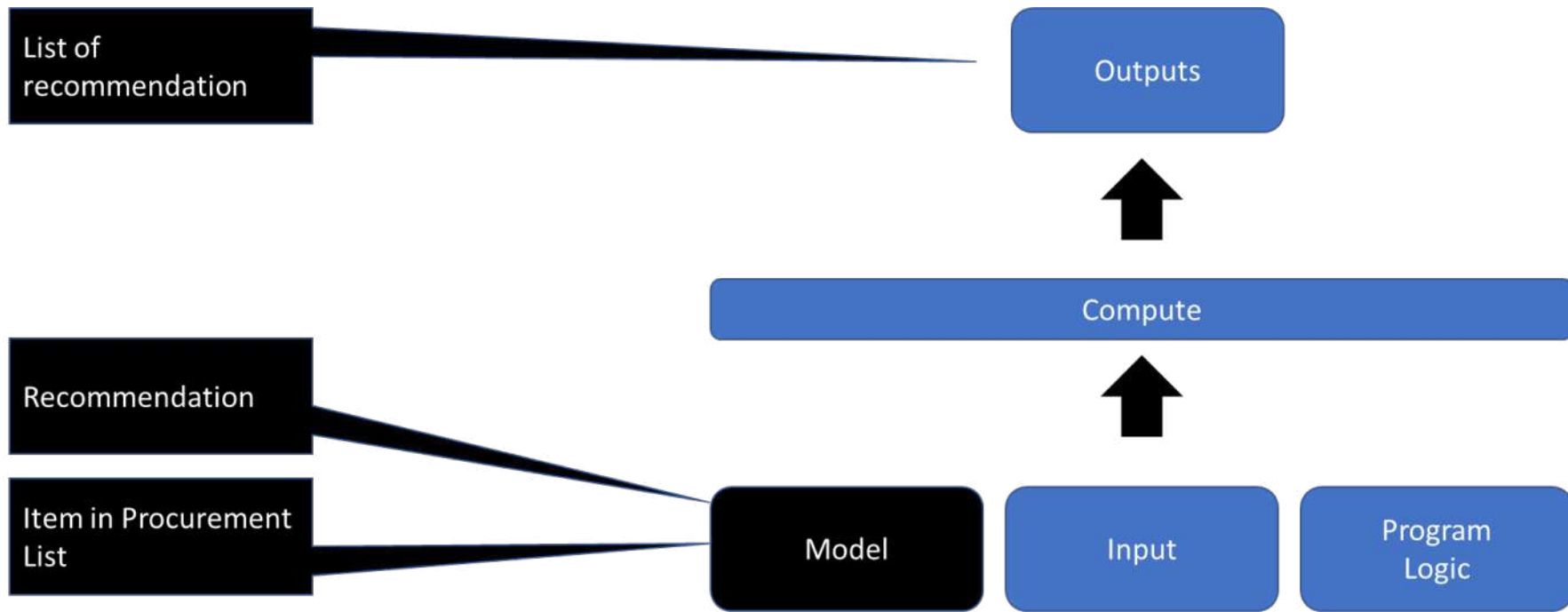
Rules:

- Vessel Name
- IMO Number
- Captain Name
- Port of Call
- Transaction Type
- Item / Product Category
- Unit of Measure
- Vendor/Customer
- Pricing
- Quantity

```
IF A > B THEN
..
ELSE
..
IF B<> C OR D=E THEN BEGIN
..
ELSE
```

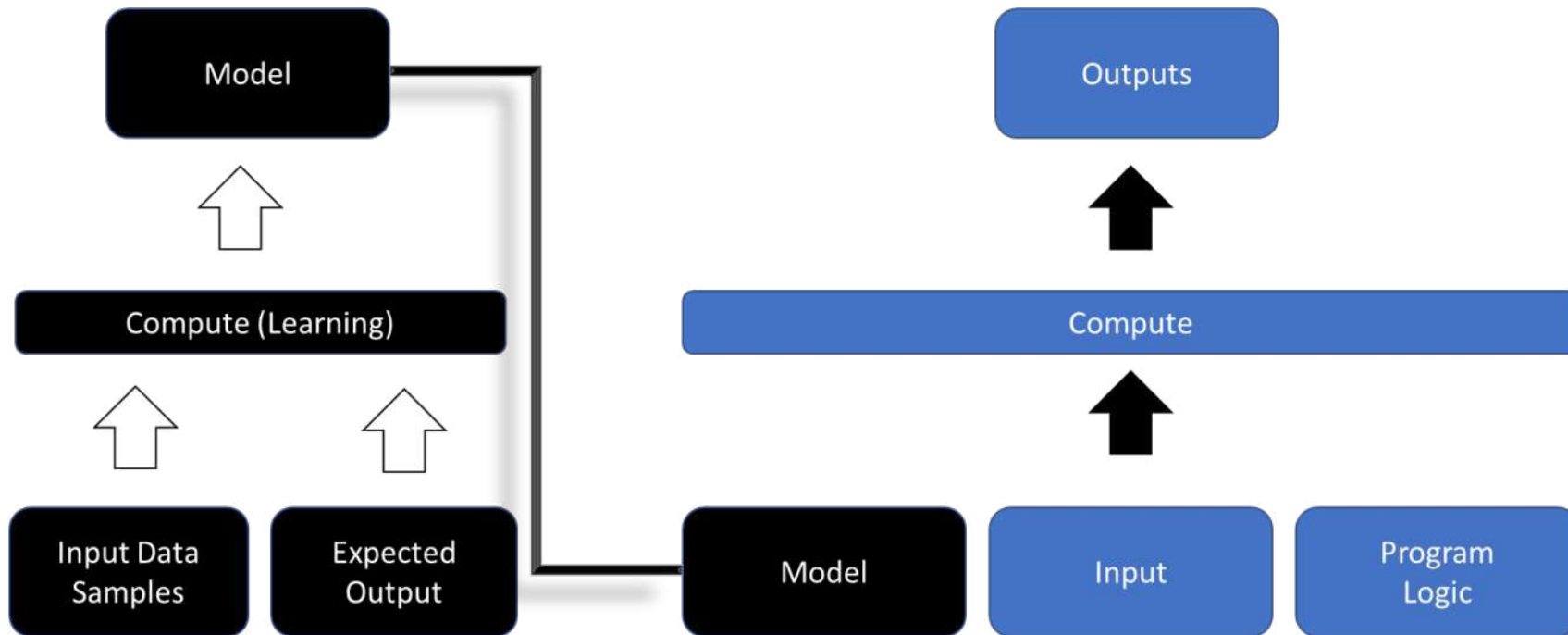


“AI Oriented Application Architecture



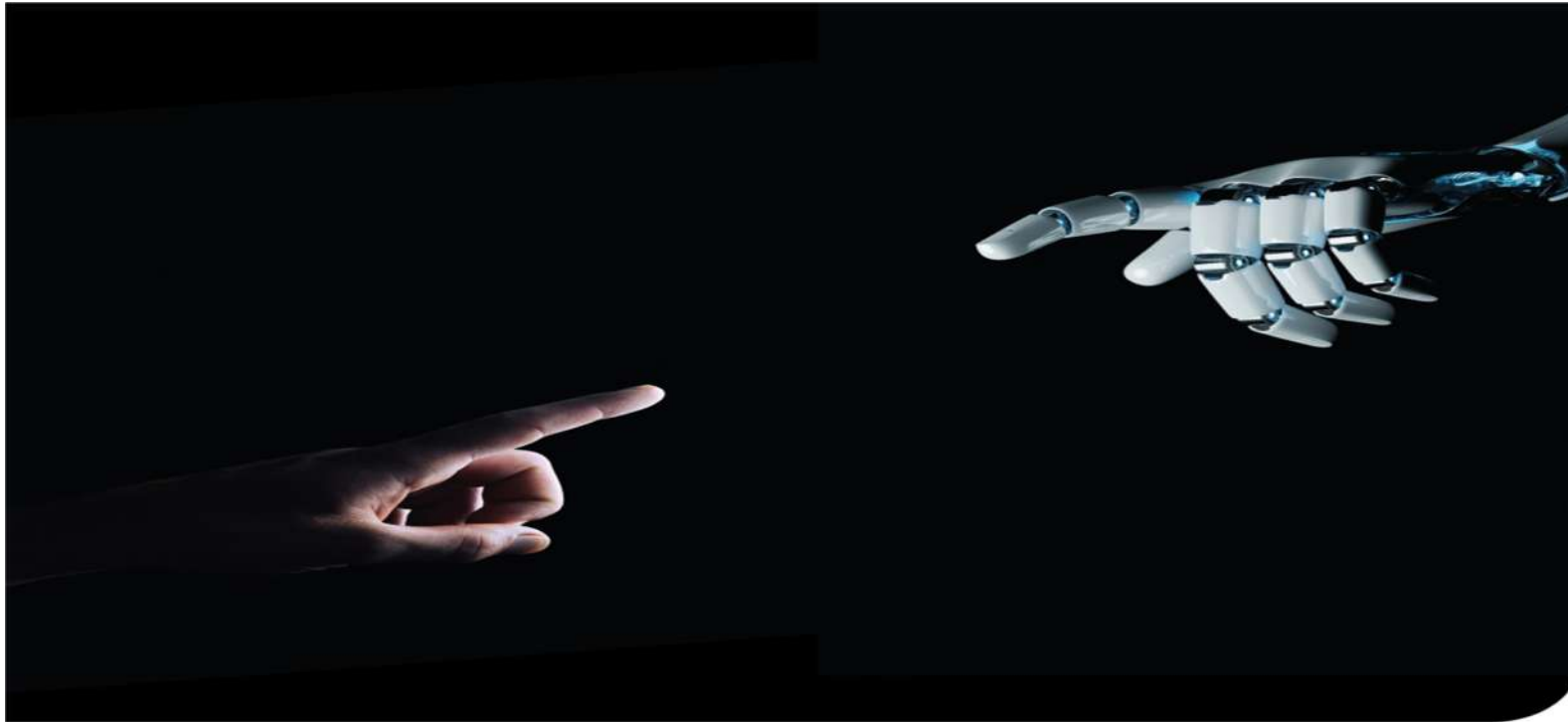


“AI Oriented Application Architecture





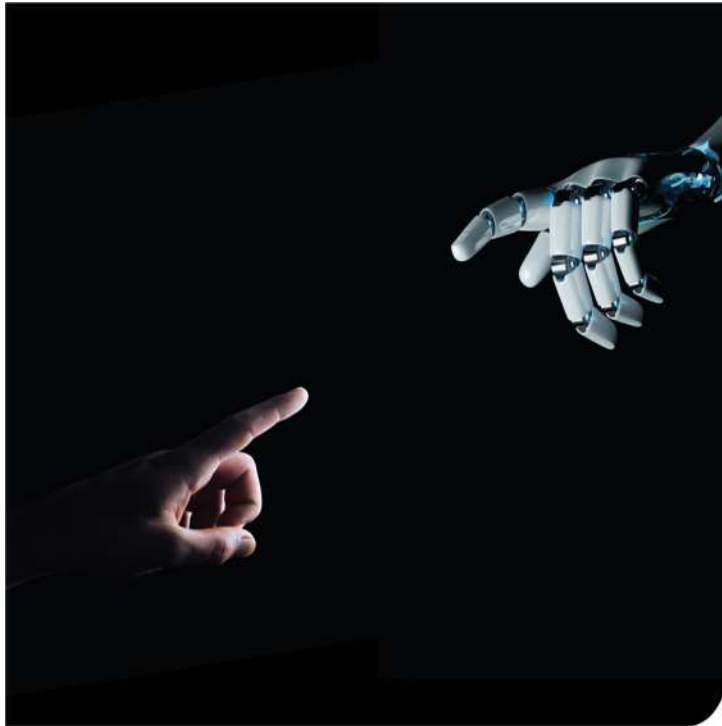
AI Service



freedom to achieve more



Maritime Industry



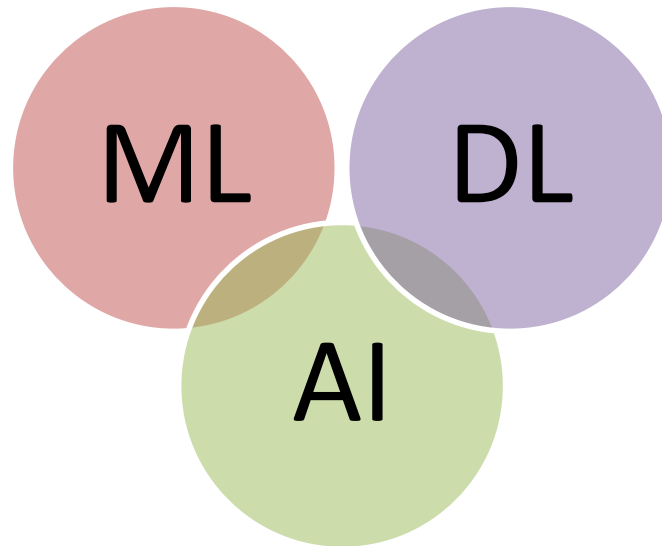
- Faster turnaround of Order fulfilments
- Improve Order's accuracy
- Improve Order Pricing and lead time
- Improve Customer's buying experience
- Mimic Experienced officers mode of operation – or way of transacting
- Consolidated bulk Ordering – Improve bottom line costing



Artificial Intelligence (AI)

Tasks that are characteristic of human intelligence

- Language and speech understanding
- Recognizing objects and sounds
- Prediction etc



Machine Learning (ML)

A way of achieving AI

- Algorithms
- Education from Data

Deep Learning (DL)

Only one type of ML



What is machine learning?

Machine Learning is the process by which a machine (Computer) is capable of showing behaviour that has not been explicitly programmed into it.

(Arthur Samuel, 1959)



Can you build AI without ML

- **A:** Yes
- **B:** No
- **C:** Maybe
- **D:** You know



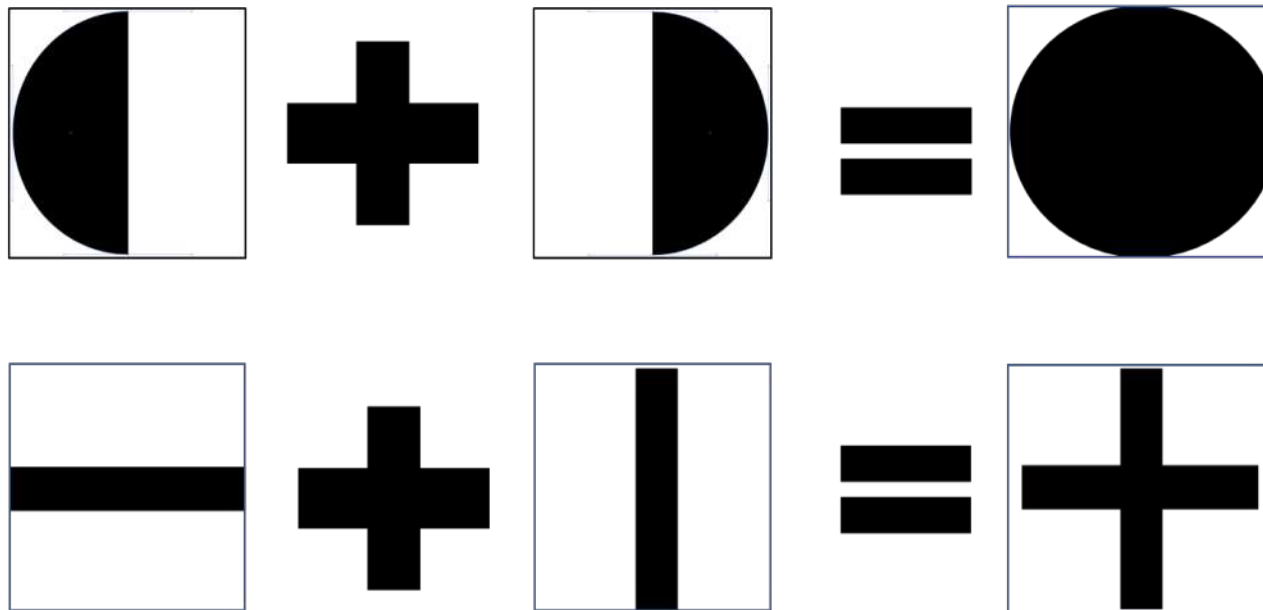
freedom to achieve more

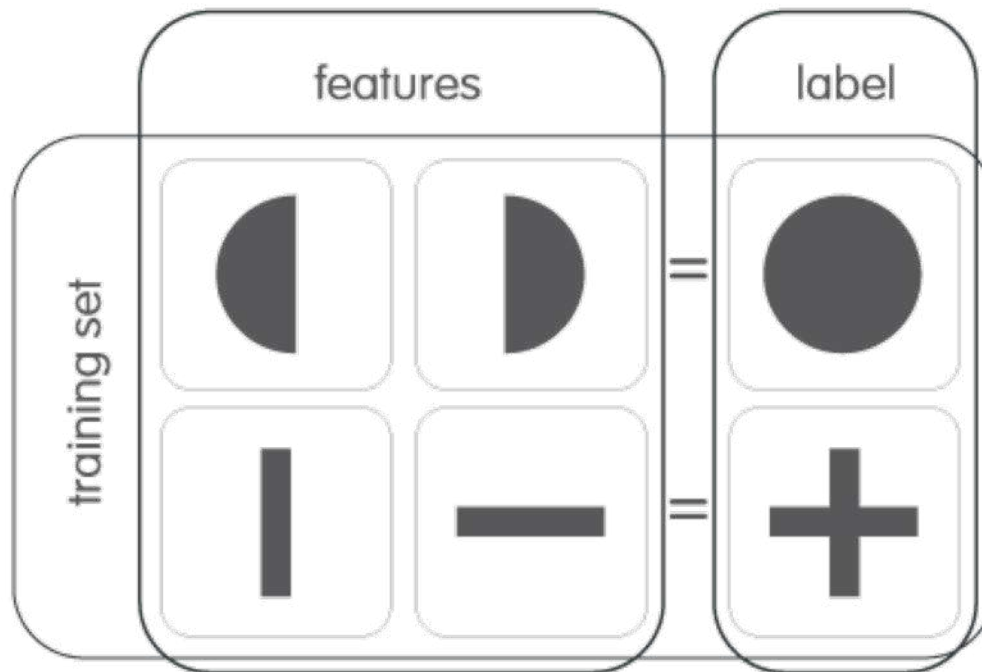


Machine Learning is great for

- Problems for which existing solutions requiring a lots of hand tuning or long list of rules
- Complex Problems for which there is no good solution at using traditional approach
- Fluctuating environments

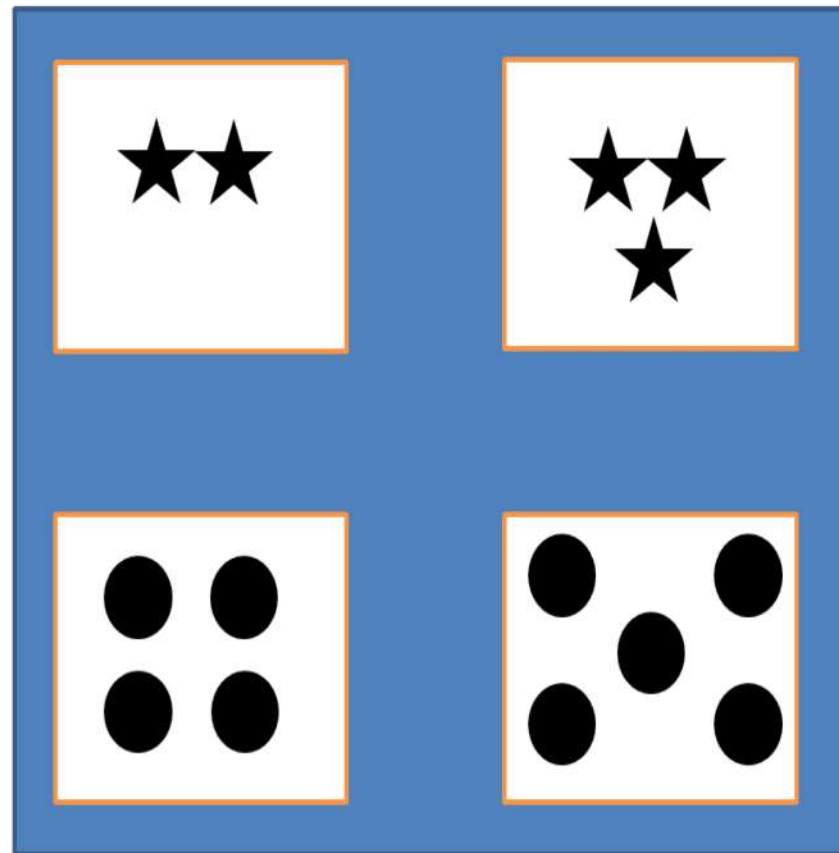
Machine Learning: Programming the Unprogrammable



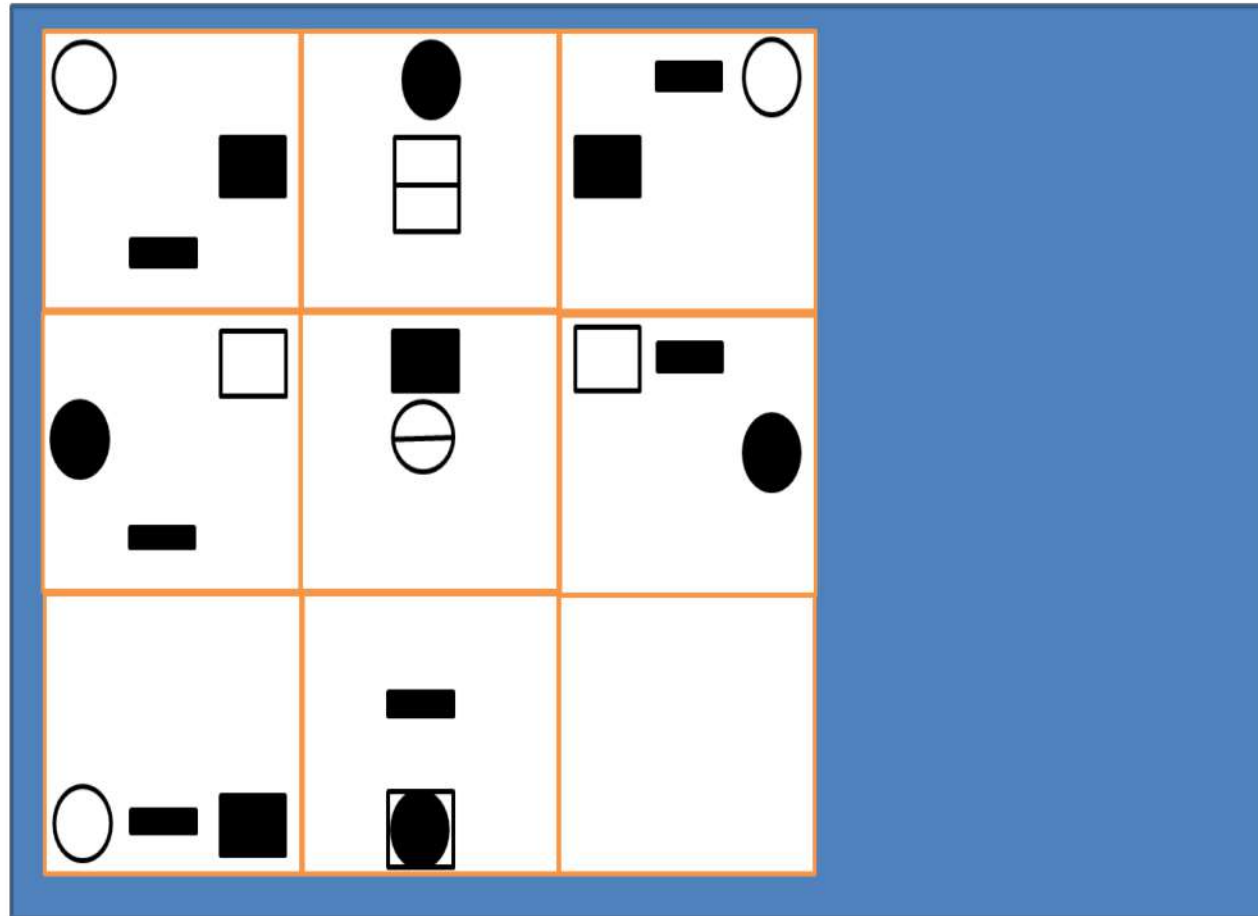


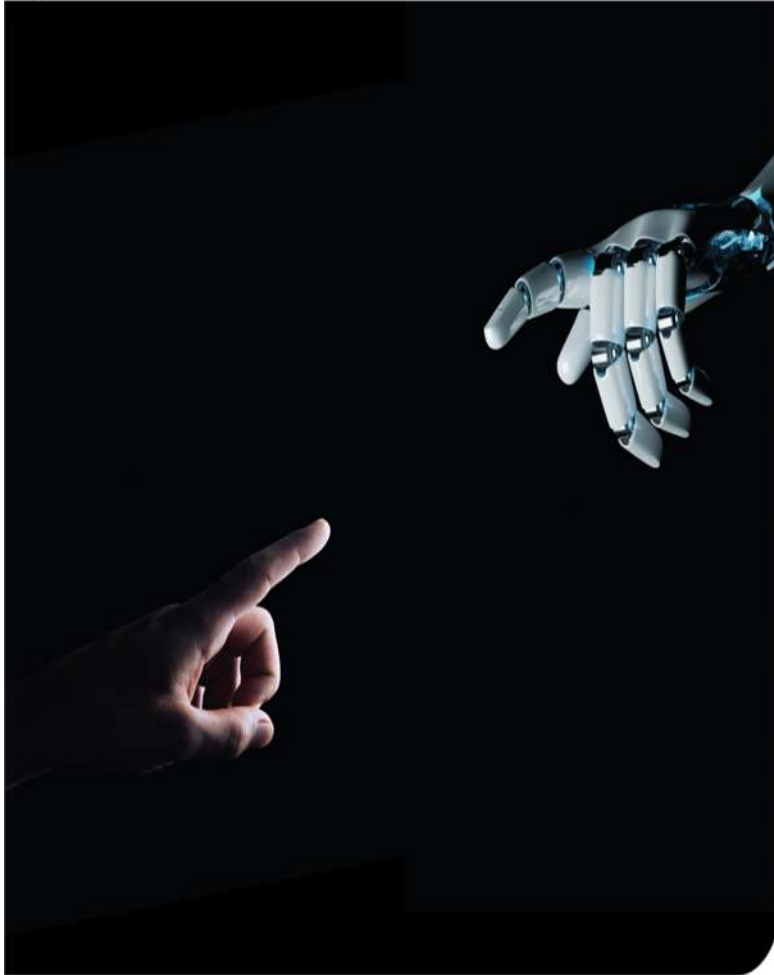
$$f(X) = X_1 + X_2$$

Machine Learning: Programming the Unprogrammable



Machine Learning: Programming the Unprogrammable





DEMO SESSION

Thank
you
very
much!



IPO SG PTE. LTD.

114 Lavender Street,
#07-85, CT Hub 2
Singapore (338729)

DID: +65 65130056

www.ipo-sg.com

freedom to achive more