



VERTICAL AI in Retail

Matteo Petruzzellis, Sanjoy Roy

Akris Ai Medium Shoulder Bag in printed fabric – Pre-Fall 2019 Collection

VIENNA





ENTERS
AI

IN THIS BUILDING DURING THE SUMMER OF 1956

JOHN McCARTHY (DARTMOUTH COLLEGE), MARVIN L. MINSKY (MIT)
NATHANIEL ROCHESTER (IBM), AND CLAUDE SHANNON (BELL LABORATORIES)
CONDUCTED

THE DARTMOUTH SUMMER RESEARCH PROJECT

1956

FOUNDING OF ARTIFICIAL INTELLIGENCE AS A RESEARCH DISCIPLINE

“To proceed on the basis of the conjecture
that every aspect of learning or any other feature of intelligence
can in principle be so precisely described that a machine can be made to simulate it.”

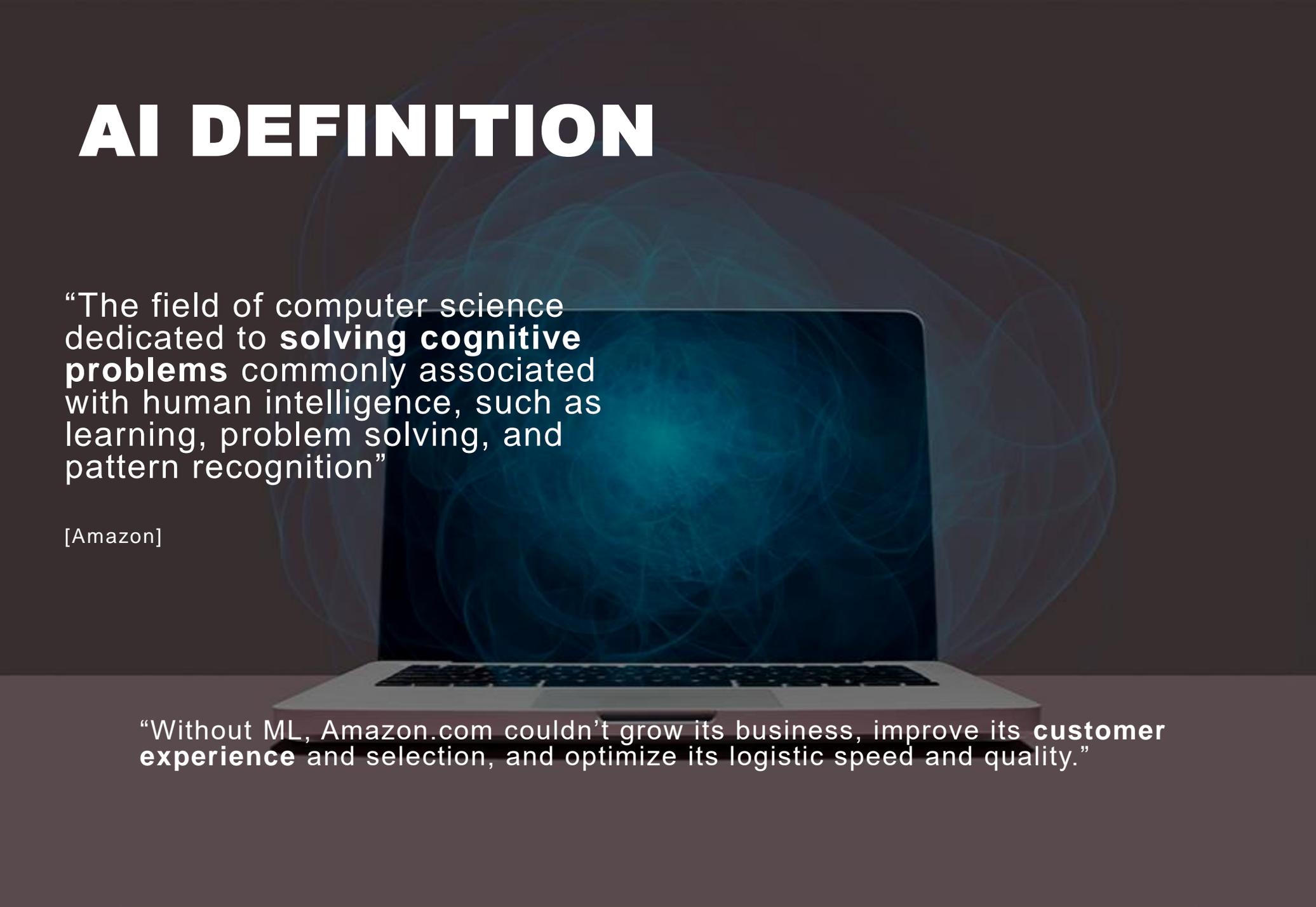
IN COMMEMORATION OF THE PROJECT'S 50th ANNIVERSARY
JULY 13, 2006

AI EFFECT

AI is whatever hasn't been done yet.



AI DEFINITION



“The field of computer science dedicated to **solving cognitive problems** commonly associated with human intelligence, such as learning, problem solving, and pattern recognition”

[Amazon]

“Without ML, Amazon.com couldn’t grow its business, improve its **customer experience** and selection, and optimize its logistic speed and quality.”

3 TYPES OF AI

AI can support three business needs:

- **Automating** business processes
- Gaining insight through **data analysis**
- **Engaging with customers**

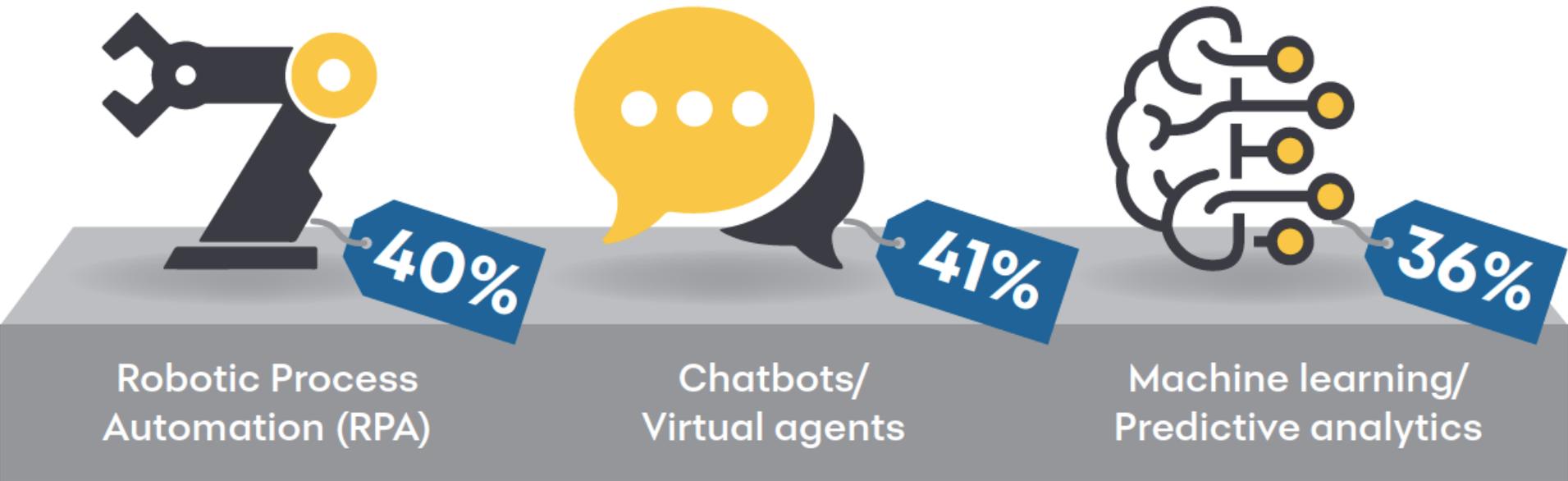
1. ROBOTICS & COGNITIVE AUTOMATION

2. COGNITIVE ENGAGEMENT

3. COGNITIVE INSIGHT

Retailers who have implemented in at least some parts of their business.

Percentage of executives who say below elements of AI have been implemented in some parts of business / broadly.



Oxford Economics report – April 2019

AskSid.ai



Sanjoy Roy | Co-Founder

Exp: 20 years – Mindtree, PwC, Bosch
Core Skills: Business builder, Sales



Dinesh Sharma | Co-Founder

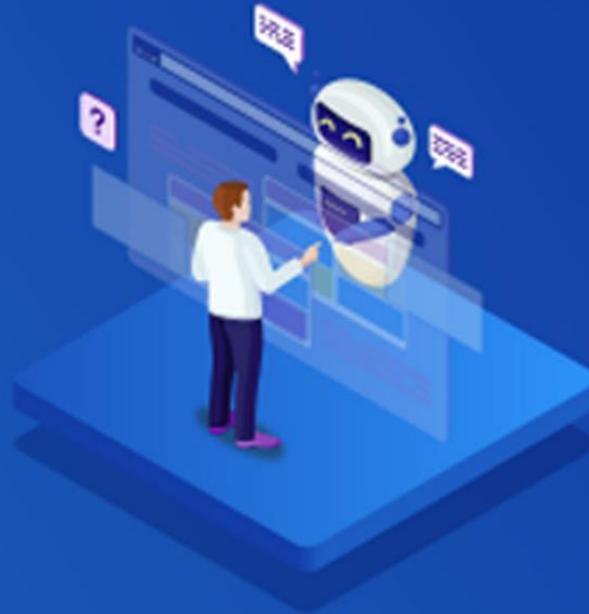
Exp: 21 years – Mindtree, Logica, R
Systems





AI/ML Workbench

Continuously enrich catalogue
Information



Vertical Conversational AI

Personalised Conversations
across platforms



Analytics Dashboard

Deep, Context-rich Customer
Insights

CONVERSATIONAL AI

Shop all products

FORMING BEACH BODY'S

A Slimmer Look for
Summer

DISCOVER



Search

My Account

Shopping Bag - 0

Wolford Private Shopper

Hi I'm Wolford's Private shopper, an AI here to make your shopping easy and convenient!

What can I help you with?

Style Me Up

Discover Products

Find My Size

Customer Service

Type your message...

powered by AskSid



Digital glamour: Woford uses Azure and AI to deliver luxury online service

+3% CR total
+40% on web
1250+ customer service requests
3100+ size profiles

“AI provides us with a complete 360-degree profile of our customers, capturing information about their individual needs. And the more data we get through conversations with the customer, the smarter the bot will become.”

—Matteo Petruzzellis: Online Director
Woford

“Azure Cognitive Services and the easy integration offered by Azure help us build solutions and onboard new customers in just four to six weeks.”

—Sanjoy Roy: Cofounder
AskSid.ai

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RULES FOR A SUCCESSFUL IMPLEMENTATION

Your AI solution:

1. Needs to understand your **business ontology**
2. Be able to predict the **user's intent** accurately
3. Should be “trainable” also with a limited dataset, then be able to **self-learn**
4. Should be able to generate proprietary data and create a **data-flywheel**
5. Should be able to be **rapidly iterated** in order to implement different use-cases & tests

ONLY VERTICAL AI DELIVERS ROI



A-K-R-I-S-

THANK YOU

Akris Ai Medium Shoulder Bag in calf leather with Swiss mountains embroidery – Pre-Fall 2019 Collection

APPENDIX

A-K-R-I-S-

1. UNDERSTAND YOUR BUSINESS ONTOLOGY

Does your AI understand the “ENTITIES” of your RETAIL business and Products you sell?

What does “Denier” mean?

What is the relationship between “Variation”, “Variation Groups” and “SKU”

“Tights” means the same as “Pantyhose”

TAKE AWAY

Your AI solution should come pre-trained on the Industry retail schema that can be quickly adapted to understand YOUR Business ontology and YOUR Products!

2. PREDICTING USERS' INTENTS

Can your AI predict the User's Intent accurately? In different languages?

"Do you have opaque tights for pregnant mothers?"

"Show me dress I can wear to a babyshower"

"Any bodysuit that covers my skin and has a long neck?"

Intent: Product Discovery

Action: Show relevant products

"I am Allergic to B106 DYE. Does this contain B106?"

"Does this hide my veins and scars?"

"Does it have pushbuttons at the crotch?"

Intent: Asking a Product Question

Action: Fetch answer from product Knowledge graph

"Want to change my shipping address, can you help?"

"Where is your store in Vienna?"

"Not able to use my voucher, why?"

Intent: Customer Service

Action: Raise CS ticket OR connect to Live Agent

"I don't know which size to buy..."

"My US size is X, what EU size to buy?"

"I am petite. Should I BUY 'S' or 'M'"

Intent: Needs help with Size

Action: Invoke Size-Finder

Your AI solution should have its own **Deep Intents library** for retail and allow **configurable actions** for every predicted intent

3. TRAINING WITH LIMITED DATASETS

Most of us struggle to get enough data within our company that we can use to train the AI. Can your AI be trained on a limited dataset and then it starts self-learning?

We might not have enough data, but we can create enough **relevant data**

- ✓ Your catalog data
- ✓ Product Images
- ✓ Past Customer service emails
- ✓ Store associate training manuals
- ✓ PDFs and Blogs
- ✓ Open source retail ontology data

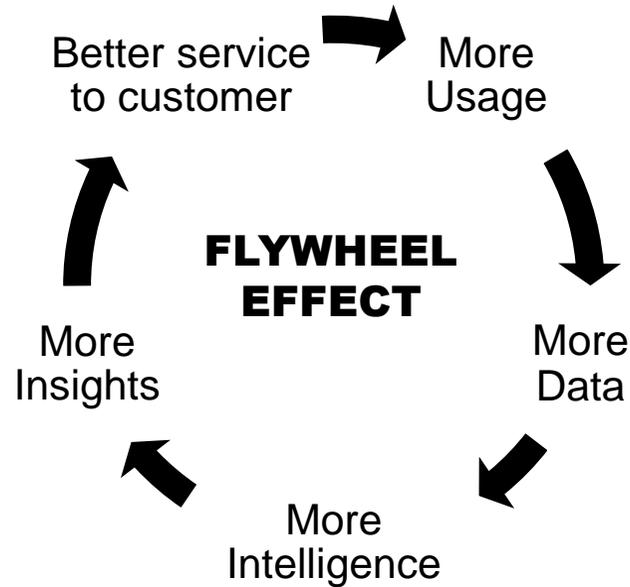
AI should be able to make sense of the above data **in its raw format**. Once you have got started, AI must be able to **self-learn**

TAKE AWAY

Your AI should allow you **TO BE IN CONTROL** – i.e. to simulate, retrain models and test & correct prediction accuracy continuously

4. GENERATING DATA-FLYWHEEL EFFECT

Can your AI generate the proprietary data that you want it to generate? The more the usage, the more the data will follow a flywheel effect.



TAKE AWAY

Is your AI solution Full Stack? – experience interface, underlying models, data backing those models and integration hooks to your systems are all part of the same solution?

A-K-R-I-S

5. RAPID ITERATION & GO-TO-MARKET

The best use of AI is in “Discovering the unknown”. Your AI should allow you to rapidly iterate, experiment and launch new user cases within weeks.

The **3 building blocks** your AI solution should have

1. A canonical domain model for Retail as the foundation layer
2. API first architecture for ease of integration
3. Configurable components that can be easily assembled to implement a new use case

In Welford, customers asked for a new ‘Style Me Service’. Our AI was able to detect it and implement this use case in 2 weeks.

From the Webshop as the only channel, we were able to Go live in Facebook & Skype in matter of days. Launching the service in stores will take max 1 week.

TAKE AWAY

Your AI solution should be FULL STACK – Experience interface, algorithms, data and integration hooks all in one.

A-K-R-I-S-

RESOURCES

<https://www.asksid.ai/>

<https://yourstory.com/2019/05/startup-conversational-ai-ecommerce-asksid-mindtree-employees>

<https://www.youtube.com/watch?v=oPEOoI9Uvxl>

<https://hbr.org/2018/01/artificial-intelligence-for-the-real-world>

<https://hbr.org/2019/05/does-your-company-really-need-a-chatbot>

<https://hbr.org/2018/07/most-of-ais-business-uses-will-be-in-two-areas>

<https://hbr.org/2019/05/when-ai-becomes-a-part-of-our-daily-lives>

<https://hbr.org/2019/05/what-boards-need-to-know-about-ai>

<https://hbr.org/2018/10/the-chairman-of-nokia-on-ensuring-every-employee-has-a-basic-understanding-of-machine-learning-including-him?>

<https://mix.com/!MjM4Zjli:is-ai-a-dude-or-a-dudette%3F>

<https://www.coursera.org/learn/ai-for-everyone/>

<https://www.elementsofai.com>

THANK YOU 2

A-K-R-I-S-