Rise of Artificial Intelligence: Should Humans be Worried?

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Agenda

- What is AI and should Humans be worried about it?
- Is there a difference between Artificial Intelligence and Machine Learning?
- Artificial intelligence is expected to be a strong disruptive influence in the coming decades. The key factors supporting AI are open source software, cheap accessible storage and computing via cloud platforms.
- How to prepare for the AI and ML wave? Is there a way i can build my own AI tool in a few weeks? We plan to show a simple demo around Video Analytics using AI & ML tools
- How is the industry planning to leverage Artificial Intelligence in the next 5 to 10 years?
- Car insurance rates determined with data from your car and box office revenue predicted and influenced by Hollywood Studios.
- Would Chatbots and RPA impact traditional IT & BPO jobs in India? .

Details about LatentView

Founded in **2006**
Princeton, San Jose, Chicago, Chennai, London, Singapore

Over **550** People Strong

Growing at an average of over **95+ %** YoY over last 5 years

Work with **30+** **Fortune 500 Firms**

Awards

Deloitte. Technology Fast50 *2009-2017*

FROST & SULLIVAN 2017 BEST PRACTICES AWARD
India Digital Transformation Awards Analytics Solutions Provider of the Year

Gartner cool vendor

IE20 INDIA EMERGING TWENTY

Recognition

Member of Forbes Customer council

amazon web services | Partner Network

Microsoft Gold Partner

Rated amongst the top **10** analytics companies to work for in India

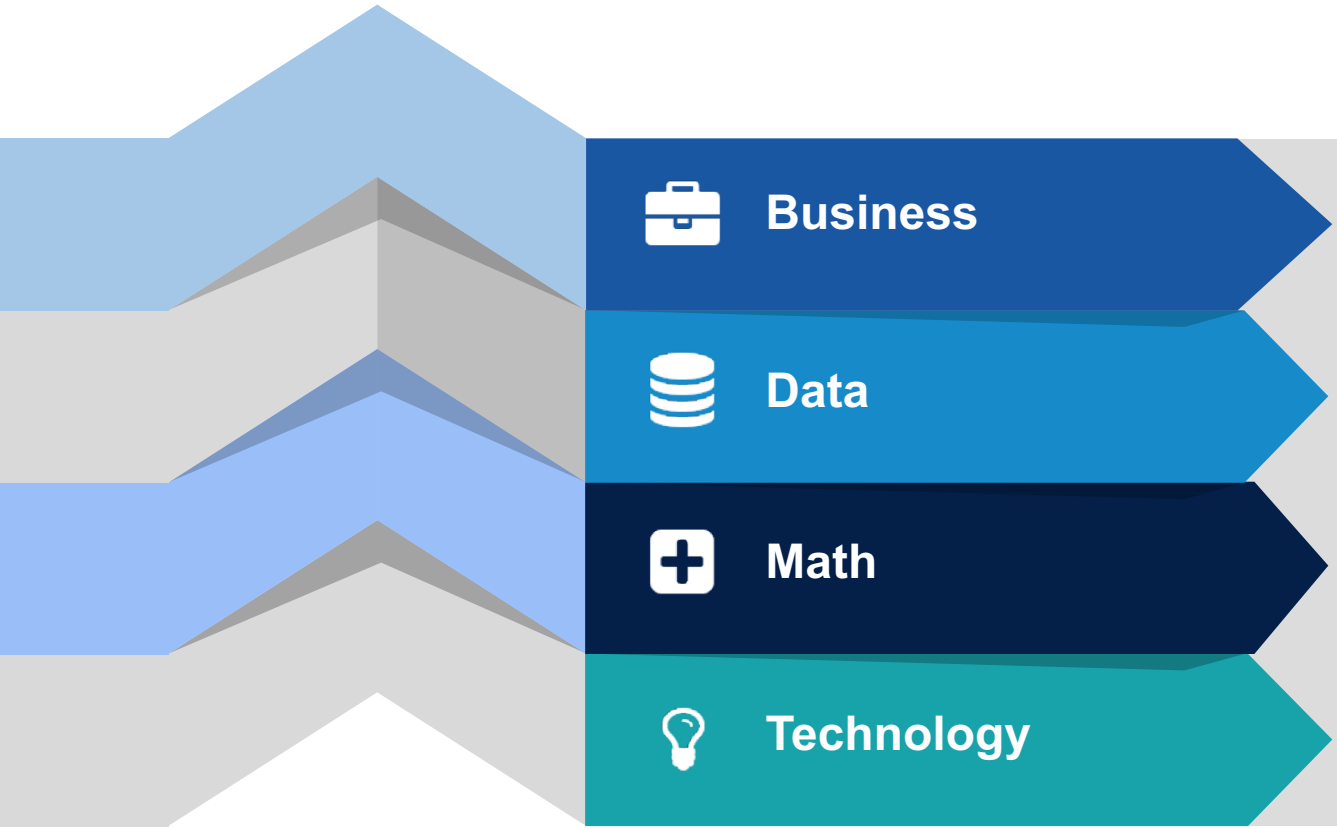
5% Re-investment in Research and Development

Repeat business at **>85%**

4/6 top technology companies engage with us

LatentView analytics philosophy

We empower customers in their digital transformation journey by helping them move up the analytics maturity curve through actionable insights that leads to data-driven decisions.



Actionable insights

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What is AI?

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Definition of AI

Theory and Development of

~~computer systems~~ Machines

able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, **decision-making,** and translation between languages.

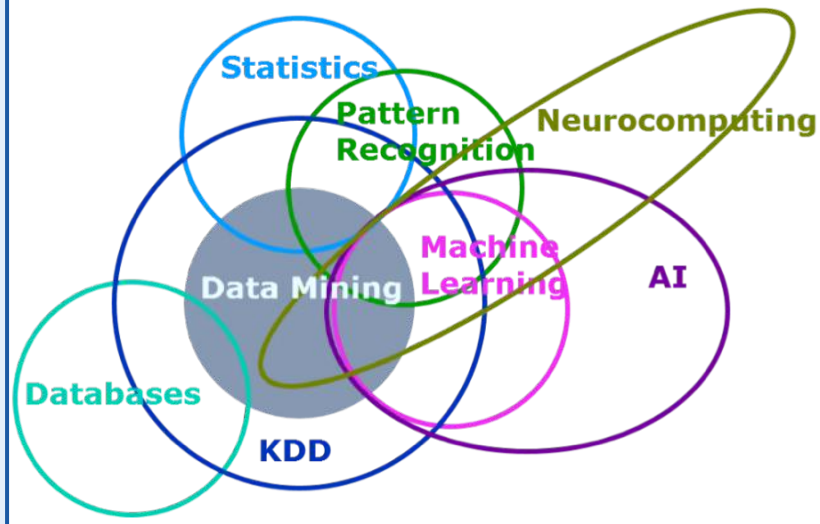
Difference between Artificial Intelligence and Machine Learning

Artificial Intelligence is creating machines that can process input, make decisions & take actions like humans

Front end

Artificial Intelligence

Machines mimicking human like vision (eyes), listening (ears), speech (mouth)



Back end

Machine learning

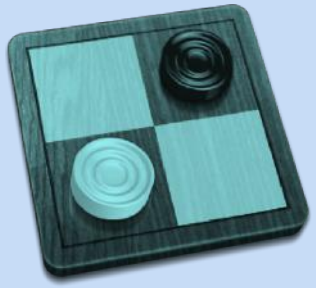
The ability of a machine to learn without being explicitly programmed

History of Artificial Intelligence

With the cheap processing capabilities offered by cloud, Artificial Intelligence has surpassed operational challenges

Artificial Intelligence

AI theory emerged, stirs excitement



Machine Learning

ML began to flourish

Deep Learning

Deep Learning breakthroughs driving AI boom

1950's	1960's	1970's	1980's	1990's	2000's	2010's	....	

AI Conceptualized

Data Availability

Advent of Cloud

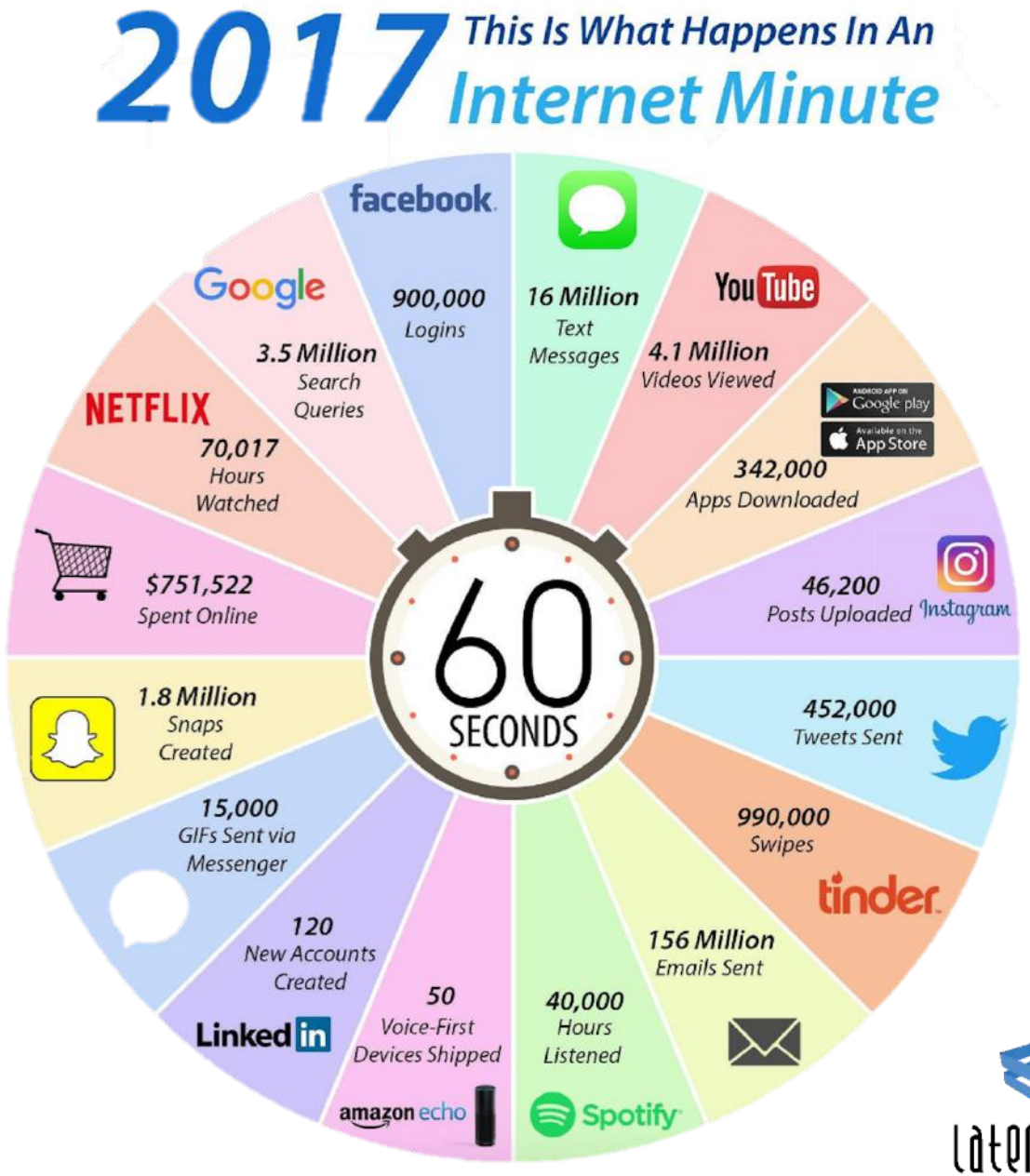
Large Amount of Data Generated by Machines allows AI to Learn

Large amount of data available for learning purposes

Free Open source software

Cheap Data Processing Capabilities thanks to cloud

Cheap Data Storage Capabilities thanks to cloud



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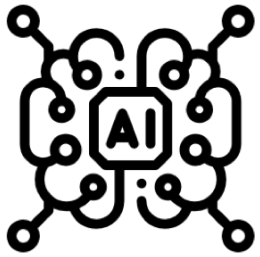
Who makes the Decision?



The AI Continuum

Assisted intelligence
Human and the machine share the decision rights

Augmented intelligence
The decision rights are solely with humans.

Autonomous intelligence
the decision rights are with the machine

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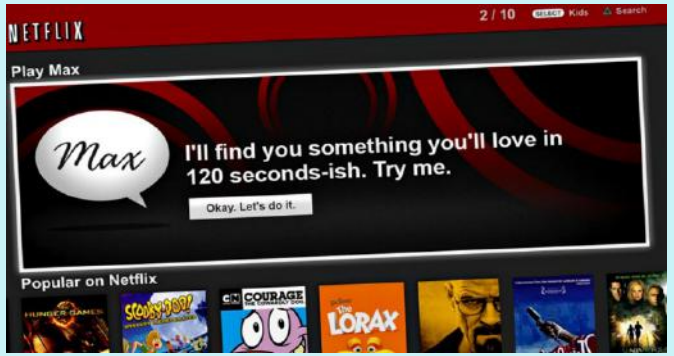
The AI Spectrum

Assisted intelligence

- Assisted intelligence amplifies the value of existing activity
- Assisted intelligence tends to involve clearly defined, rules-based, repeatable tasks. These include automated assembly lines and other uses of physical robots
- Success with assisted intelligence should lead to improvements in conventional business metrics such as labour productivity, revenues or margins per employee, and average time to completion for processes

Augmented intelligence

- Unlike assisted intelligence, it fundamentally alters the nature of the task, and business models change accordingly
- They involve advanced forms of machine learning and NLP, plus specialized interfaces tailored to your company and industry. Ex. Netflix using ML to build a recommendation engine
- The success of an augmented intelligence effort depends on whether it has enabled your company to do new things



Autonomous intelligence

- Systems that make decisions without direct human involvement or oversight
- They will do so only after the human decision maker starts trusting the machine or becomes a liability for fast transactions. Ex. Autonomous cars, robots that dispose of bombs
- Autonomous intelligence's greatest challenge may not be technological at all, it may be companies' ability to build in enough transparency for people to trust these systems to act in their best interest

Current Decisions are 50% Emotions (Due to Bad data) + 50% Thoughts (Logic)"

Should Humans be worried about AI?

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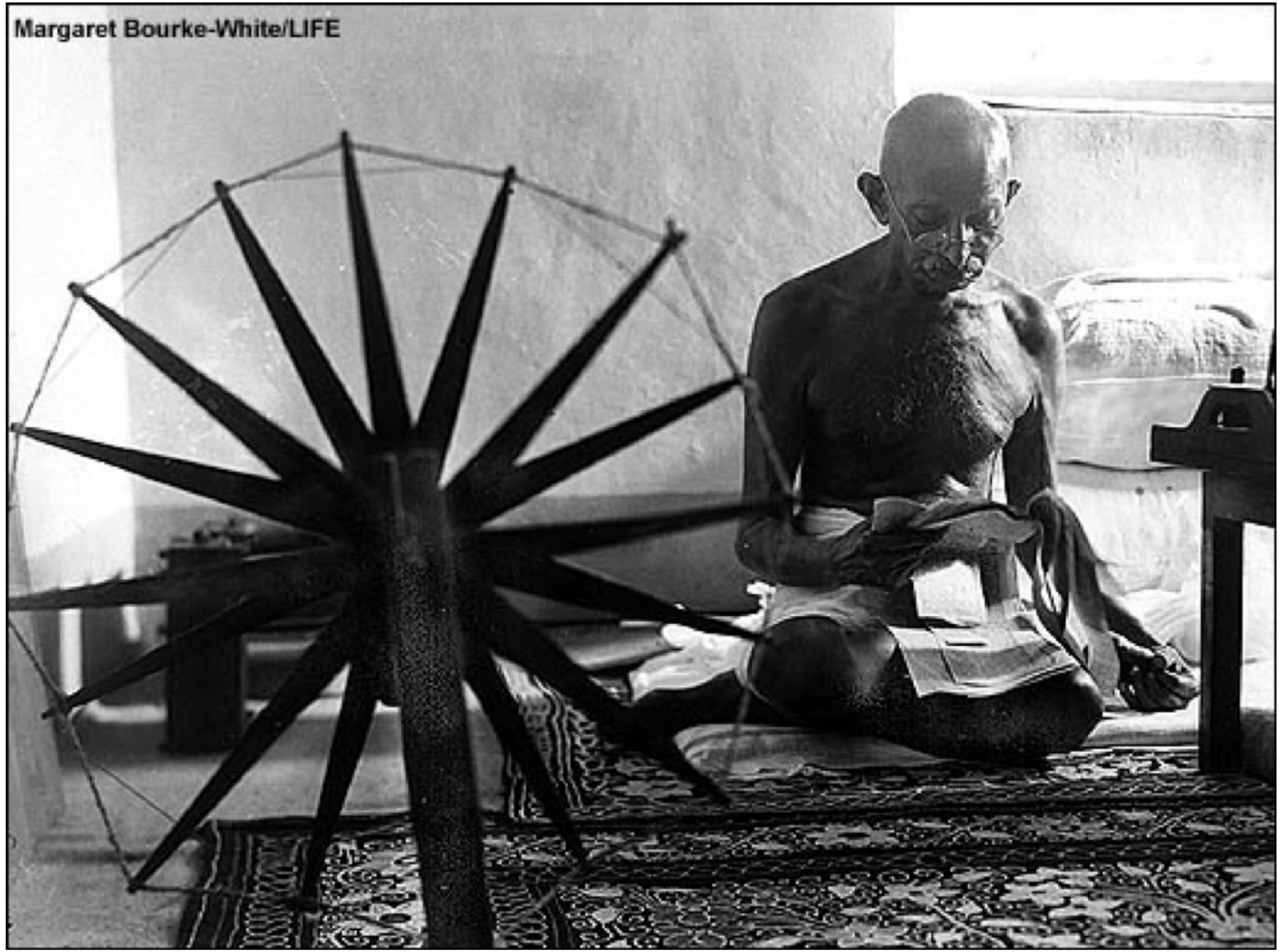
Concerns around machines and industrialization

”I know that man cannot live without industry. Therefore, I cannot be opposed to industrialization. But I have a great concern about introducing machine industry. The machine produces much too fast, and brings with it a sort of economic system which I cannot grasp. I do not want to accept something when I see its evil effects which outweigh whatever good it brings with it.”

Mahatma Gandhi was concerned with Unemployment due to machines



Evolution of Machines similar to Evolution of Humans

Humans being created

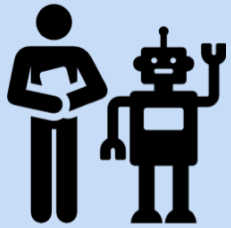
Humans communicate with each other

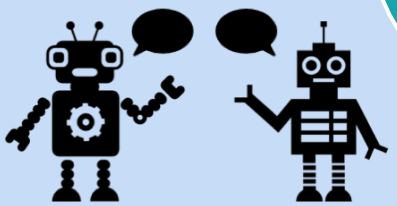
Humans begin to think

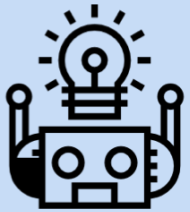
Creation

Comm-unication

Learning







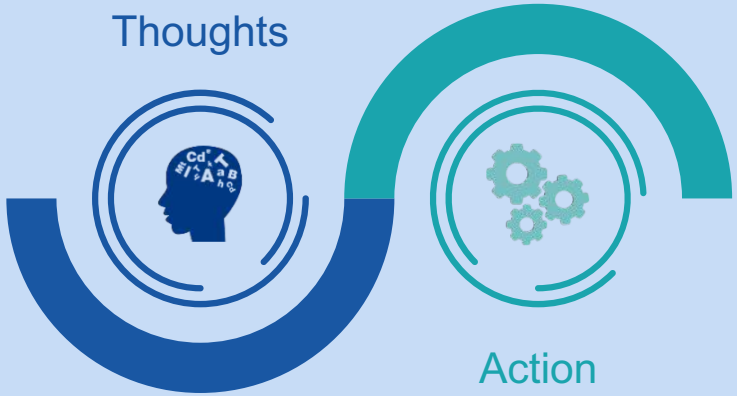
Machines being created (Industrial revolution)

Machines communicate with each other (Internet)

Machines begin to think (Artificial Intelligence)

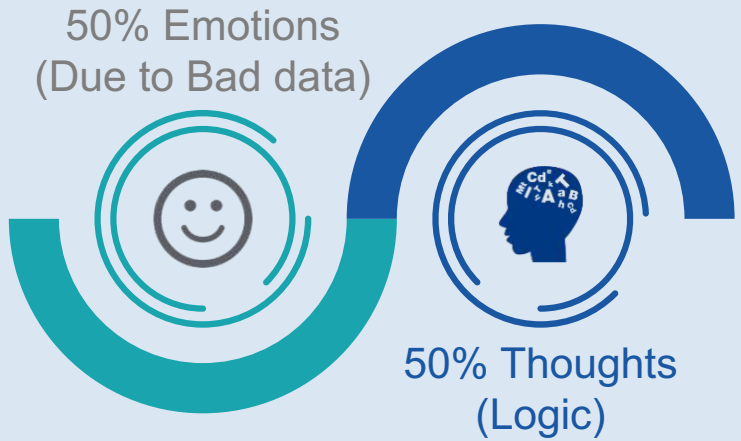
Point 1: Machines don't have emotions

Human evolution in 3 dimensions



Machines evolution in 2 dimensions

But Decisions are
50% Emotions (Due to Bad data) +
50% Thoughts (Logic)



the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, **decision-making,** and translation between languages.

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Point 2: Humans are generalized AI vs Machines are specialized AI

AI that can drive a driver less cars cannot classify email spam

AI is very specific to a business use case

While the same Human can driver cars and classify email Spam

Humans are able to continuous identify and develop solutions to new problems

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Suggestion: Learn to Communicate with both People and Machines

Languages

People	Machines
English	Java
Tamil	SQL
Telugu	Python
Hindi	R
Japanese	

Learn 100 words for Human & Machine languages

Learn basic scripting – Other syllabus (Non-CBSE, Non Samcheer Kalvi) teach 6th grade children to program in HTML

Complete projects that cover various disciplines (Cross disciplines)

Hardware layer	Software layer
Mechanical engineering – Automobiles - **Machines** for prime movers and movement	Computer science, IT
ECE & EE – Phones - **Machines** for communication	Math, Stats, Operations Research

Domain

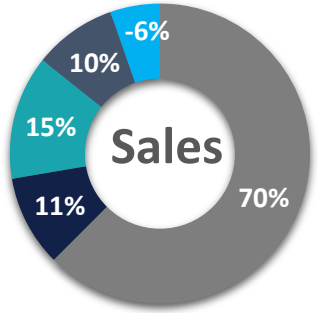
- Marketing
- Healthcare
- Manufacturing
- Automobiles

IITM – Cross disciplinary AI & ML labs (Robert Bosch CSR Funding)

ML & DL Examples in Digital Marketing at LatentView

Media Mix Model for Digital Companies

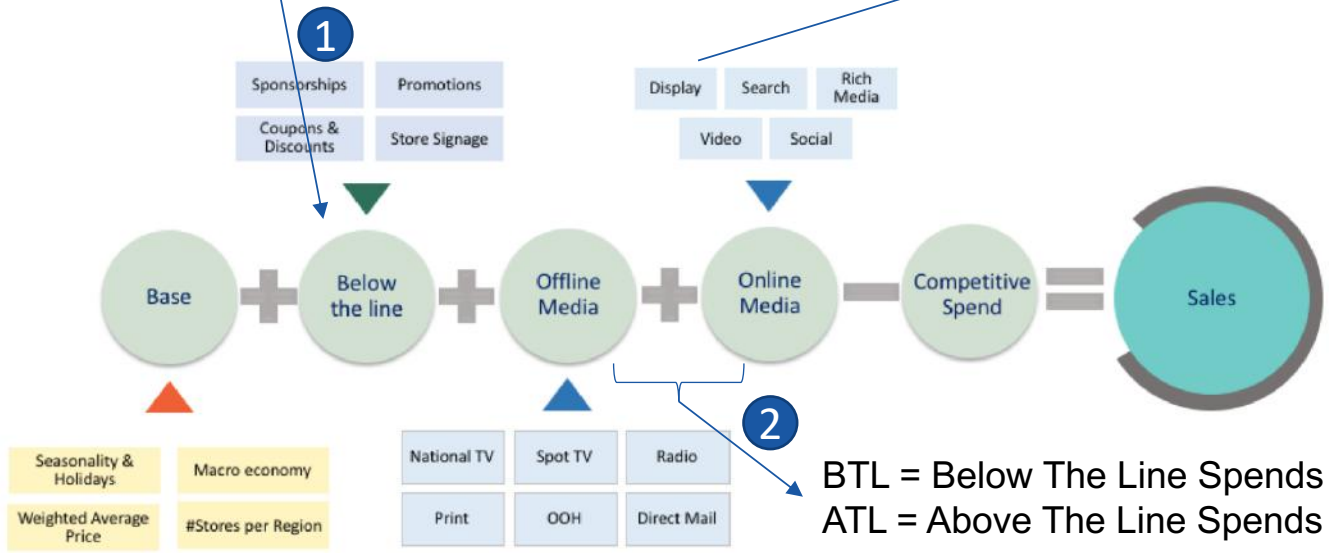
Methodology: Decomposition for Technology product Sales using Multiplicative Regression



Base BTL ATL Events Competition

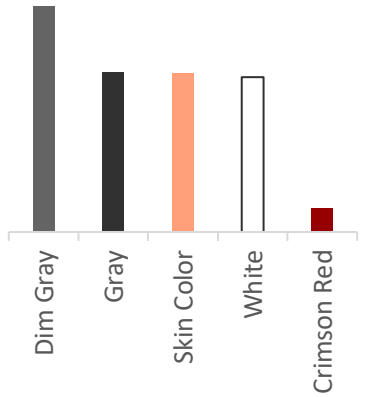
ML

3



BTL = Below The Line Spends
ATL = Above The Line Spends (Offline Media + Online Media)

Image Classification for Hollywood Studios



Methodology: Image Classification based on colour

DL

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For a Europe-based automobile manufacturer

Warranty claim predictions based on historical averages

Costs incurred due to warranty claims had a negative impact of almost 2.5% on the bottom line

Risk identification by modeling customer behavioral patterns

identify vehicle usage patterns by providing real-time data from connected vehicles.

Are there claim patterns to individual styles?

What are the main driving styles?

Use the tool to identify risk groups by dynamic profiling

Business Impact

Reduction in warranty costs by **35%**

Improved predictive maintenance resulting in enhanced customer satisfaction

Test hypothesis at scale and **generate multiple insights**

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Q&A

Thank you

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