

Newsletter

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Prof. Yoshua Bengio

"... it is extraordinary to feel the AI energy that is developing in Morocco and I encourage everyone to keep pushing"



MOROCCOAI 2021 CONFERENCE

Recordings available!

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Opening Letter

Dear MoroccoAI community,

The last month has been both impressive and challenging for many of us across the world. It is our great pleasure to share with you recent news from MoroccoAI and we hope you will enjoy this first edition of the MoroccoAI's Newsletter!

Over this past year, our community has grown in both size and the ways we work together. Our slack community has gone from 100 members in January 2021 to over 1,000 members in January 2022.

We sincerely thank you all for your continuous support and involvement of MoroccoAI!

AI



Around The World

Business



Google uses deep learning to design faster, smaller AI chips

Googlers and UC Berkeley academics say they have devised a way to use artificial intelligence to design faster and smaller chips that accelerate artificial intelligence. In a note shared on Thursday the researchers said they have developed [...read more](#)

Nvidia unveils new technology to speed up AI, launches new supercomputer

Nvidia Corp on Tuesday announced new chips and technologies that it said will boost the computing speed of increasingly complicated artificial intelligence algorithms, stepping up competition against rival chipmakers vying for lucrative data center business. The company provided details of new graphic chips (GPU) that will be at the core of AI infrastructure releasing the H100 chip and a new processor chip [...read more](#)

Mercedes Drive Pilot Beats Tesla Autopilot By Taking Legal Responsibility

Mercedes' new Drive Pilot seems, in operation, like many "traffic jam assistant" technologies already on sale today. On certain highways, below 40 mph, a Drive Pilot-equipped S-Class or EQS will take control of the car's speed, steering, and brakes to move you along in traffic. But there's one key difference: Once you engage [...read more](#)

Top AI execs, including Richard Socher, launch AIX Ventures

In a sign that the coffers of AI startups need little replenishing, Richard Socher, former chief scientist at Salesforce and the CEO of You.com, today announced the launch of a \$50 million "AI-focused" venture fund called AIX Ventures. Speaking to VentureBeat via email, Shaun Johnson, a cofounder of AIX alongside Pieter Abbeel, Anthony Goldbloom, and Chris Manning, said that the goal is to make AIX a "household name" for AI-focused venture capital. [...read more](#)

LOOKING AT 2030: THE FUTURE OF ARTIFICIAL INTELLIGENCE AND METAVERSE

With the pace artificial intelligence is intertwining within our lives, there is no doubt that it will not end anytime soon. Rather, the future looks like a society that would breathe and thrive through artificial intelligence only. Experts believe that specialized AI applications will become both increasingly common and more useful by 2030, improving our economy and quality of life. On the other hand, metaverse already has a wrapped [...read more](#)

Wearables and AI will be The Game Changer in Healthcare

The game changer in healthcare is going to be the combination of wearables and AI (Artificial Intelligence). We all know that wearables bring immense value in capture health data and they will be crucial for healthcare delivery of the future. Artificial Intelligence (AI) can do so much, from analysing large amount of data, early diagnostics, automation of processes and benchmark many medical practices [...read more](#)

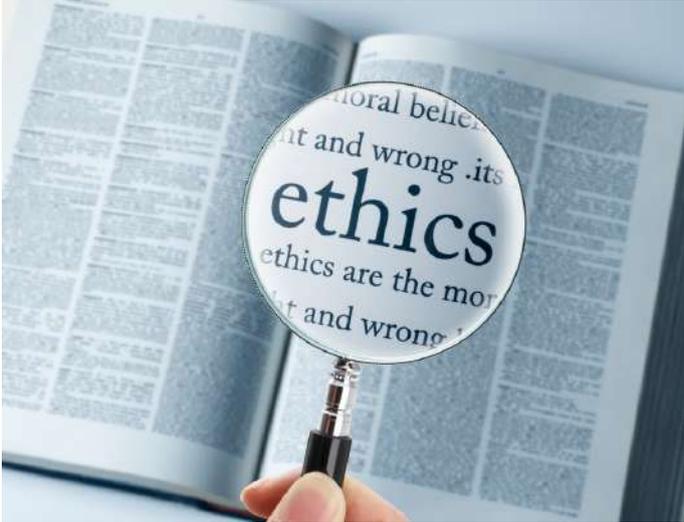
A Wave Of Billion-Dollar Language AI Startups Is Coming

Language is at the heart of human intelligence. It therefore is and must be at the heart of our efforts to build artificial intelligence. No sophisticated AI can exist without mastery of language. The field of language AI—also referred to as natural language processing, or NLP—has undergone breathtaking, unprecedented advances over the past few years. Two related technology breakthroughs have driven [...read more](#)

How AI Can Make Weather Forecasting Better and Cheaper

In early February a black box crammed with computer processors took a flight from California to Uganda. The squat, 4-foot-high box resembled a giant stereo amp. Once settled into place in Kampala, its job was to predict the weather better than anything the nation had used before. The California startup that shipped the device, Atmo AI, plans by this summer to swap it out for a grander invention: a sleek, metallic supercomputer standing 8 feet tall and packing in 20 times more power [...read more](#)

Ethics



In the metaverse, responsible AI must be a priority

According to a recent Bloomberg Intelligence report, the metaverse is an \$800 billion market. Still others argue about what the metaverse actually is, but with so much money and curiosity surrounding it, it has everyone talking. Undoubtedly, AI will [...read more](#)

Academics launch new report to help protect society from unethical AI

A world-first approach to help organisations comply with future AI regulations in Europe has been published today in a report by the University of Oxford and the University of Bologna. It has been developed in response to the proposed EU Artificial Intelligence Act (AIA) of 2021, which seeks to coordinate [...read more](#)

Examining the ethics of AI development

Artificial intelligence (AI) is a concept that gets batted around freely these days. Generally, the public tends to think of campy popular science fiction depictions of AI. However, even among those working in technology, there's not always an agreed-upon definition of AI. We tend to use AI as a category heading, an umbrella [...read more](#)

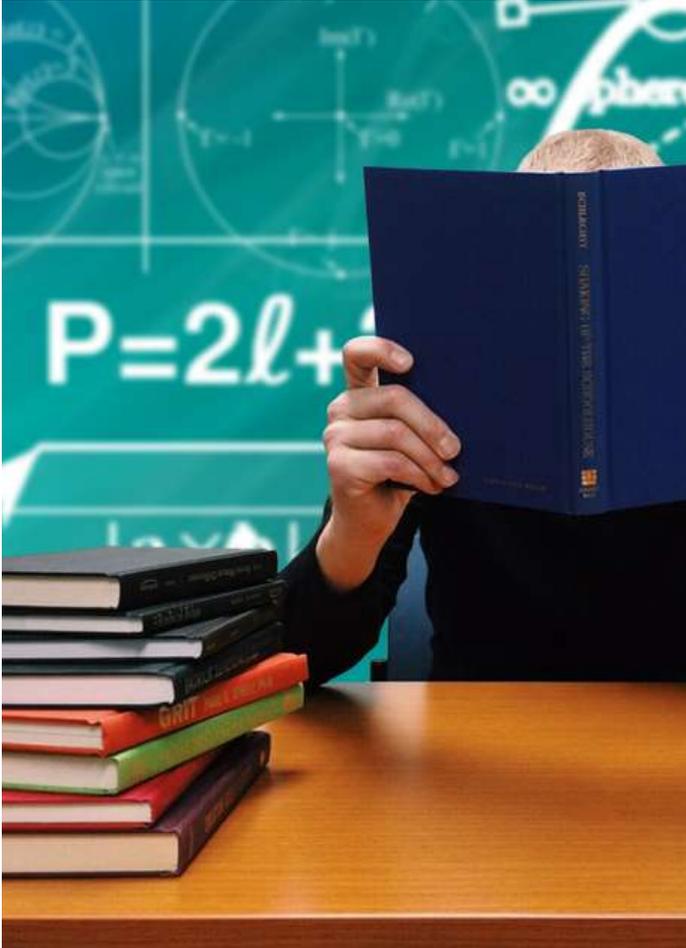
Without universal AI literacy, AI will fail us

Much has been said about the potential of artificial intelligence (AI) to transform how we live, work, and interact with each other. But we must also draw attention to a less discussed, but equally important, question — do we have the skills required to develop AI inclusively and use it responsibly? AI adoption is accelerating [...read more](#)

The 2022 AI Index: Industrialization of AI and Mounting Ethical Concerns

The field of artificial intelligence (AI) is at a critical crossroad, according to the 2022 AI Index, an annual study of AI impact and progress at the Stanford Institute for Human-Centered Artificial Intelligence (HAI) led by an independent and interdisciplinary group of experts from across academia and industry: 2021 saw the globalization [...read more](#)

Learning



Deep Learning Is Hitting a Wall

Let me start by saying a few things that seem obvious,” Geoffrey Hinton, “Godfather” of deep learning, and one of the most celebrated scientists of our time, told a leading AI conference in Toronto in 2016. “If you work as a radiologist you’re like the coyote that’s already over the edge of the cliff but hasn’t looked down.” Deep learning is so well-suited to reading images from MRIs and CT scans, he reasoned, that people should “stop training radiologists now” and that it’s “just completely obvious within five years deep learning is going to do better.” Fast forward to 2022, and not a single radiologist [...read more](#)

The history of machine learning algorithms

Machine learning algorithms can perform exponential tasks today—from mastering board games and identifying faces to automating daily tasks and making predictive decisions—this decade has brought forward countless algorithmic breakthroughs and several controversies. But one would find it a challenge to believe this development started only less than a century ago with Walter Pitts and Warren McCulloch. Analytics India Magazine takes you through a historical story of machine learning [...read more](#)

Stanford Annual report on AI : Artificial intelligence is everywhere now

Artificial intelligence is getting cheaper, better at the tasks we assign it, and more widespread—but concerns over bias, ethics, and regulatory oversight still remain. At a time when AI is becoming accessible to everyone, the Stanford Institute for Human-Centered Artificial Intelligence put together a sweeping 2022 report analyzing the ins [...read more](#)

12 Graphs That Explain the State of AI in 2022

Every year, the Stanford Institute for Human-Centered Artificial Intelligence (HAI) puts out its AI Index, a massive compendium of data and graphs that tries to sum up the current state of artificial intelligence. The 2022 AI Index, which came out this week, is as impressive as ever, with 190 pages covering R&D, technical performance, ethics, policy, education, and the economy. I've done you a favor by reading every page of the report and plucking out 12 charts that capture the state of play [...read more](#)

AI Essentials: Year-end Review

2022 is expected to be a decisive year on whether the US Federal Government will adopt rules to regulate AI. Over the recent years, the debate has been fierce on this question in the US. The most frequent argument put forward by opponents is the worry that regulation would hamper innovation - hence competitiveness. Earlier this year, in April, the European Commission proposed the "AI Act" to regulate AI assuming that "systems deemed to be of unacceptable risk, such as manipulative or social scoring systems, will be prohibited". This decision could be an incentive for US policymakers to advance on this [...read more](#)

The Data Scientific Method vs. The Scientific Method

Data science has a science problem. A lot of data science seems much more aligned with cargo cult science, a phrase coined by Richard Feynman to describe an endeavor with the trappings and appearance of science, but at its core, is pseudoscience or snake oil. Cargo cult science feels too familiar to me. Sure, we use computers, look at numbers, write down equations, and call ourselves scientists, but an anti-pattern has become so common for me I've come up with a heuristic to describe it- the data scientific method. Here's how we apply the data scientific method to a project [...read more](#)

Deep Neural Nets: 33 years ago and 33 years from now

The Yann LeCun et al. (1989) paper Backpropagation Applied to Handwritten Zip Code Recognition is I believe of some historical significance because it is, to my knowledge, the earliest real-world application of a neural net trained end-to-end with backpropagation. Except for the tiny dataset (7291 16x16 grayscale images of digits) and the tiny neural network used (only 1,000 neurons), this paper reads remarkably modern today, 33 years later - it lays out a dataset, describes the neural net architecture, loss function, optimization, and reports the experimental classification error rates over training and test sets. It's all very recognizable [...read more](#)

Research



Dartmouth Researchers Propose A Deep Learning Model For Emotion-Based Modeling of Mental Disorders Using Reddit Conversations

According to the World Health Organization (WHO), mental diseases impact one out of every four people at some point in their lives, according to the World Health Organization (WHO). However, due to the social stigma associated with seeking professional care, patients in many parts of the world do not actively seek it [...read more](#)

Assessing Generalization of SGD via Disagreement

Estimating the generalization error of a model — how well the model performs on unseen data — is a fundamental component in any machine learning system. Generalization performance is traditionally estimated in a supervised manner, by dividing the labeled data into a training set and test set. However, high-quality labels are usually costly and, ideally, we would like to use all of them to train the model [...read more](#)

AI can help historians restore ancient texts from damaged inscriptions

An artificial intelligence algorithm developed as part of a collaboration between historians and UK-based AI firm DeepMind can help restore ancient Greek texts with 72 per cent accuracy. The AI can also predict where in the ancient Mediterranean world the texts were originally written with more than 70 per cent accuracy and date them to within a few decades of their agreed-upon date of creation [...read more](#)

Will Transformers Take Over Artificial Intelligence?

Imagine going to your local hardware store and seeing a new kind of hammer on the shelf. You've heard about this hammer: It pounds faster and more accurately than others, and in the last few years it's rendered many other hammers obsolete, at least for most uses. And there's more! With a few tweaks — an attachment here, a twist there — the tool changes into a saw that can cut at least as fast and as accurately as any other option out there. In fact, some experts at the frontiers of tool development [...read more](#)

MIT research suggests AI can learn to identify images using synthetic data

MIT researchers have found a way to classify images using synthetic data, which they claim can rival models trained from real data. In the study, the team created a special type of machine learning model to generate extremely realistic synthetic data, which can then train another model for vision-related tasks. The researchers said that currently, massive amounts of data is required to train a machine to perform image classification tasks, such as identifying damage [...read more](#)

Pathways Language Model (PaLM): Scaling to 540 Billion Parameters for Breakthrough Performance

In recent years, large neural networks trained for language understanding and generation have achieved impressive results across a wide range of tasks. GPT-3 first showed that large language models (LLMs) can be used for few-shot learning and can achieve impressive results without large-scale task-specific data collection or model parameter updating. More recent LLMs, such as GLaM, LaMDA, Gopher, and Megatron-Turing NLG, achieved state-of-the-art few-shot results on many tasks by scaling model size, using sparsely activated modules, and training on larger datasets from more diverse sources. Yet much work remains in understanding the capabilities that emerge with few-shot learning as we push the limits of model scale [...read more](#)

DALL·E 2: a new AI system that can create realistic images and art from a description in natural language

In January 2021, OpenAI introduced DALL·E. One year later, the newest system, DALL·E 2, generates more realistic and accurate images with 4x greater resolution. DALL·E 2 has learned the relationship between images and the text used to describe them. It uses a process called “diffusion,” which starts with a pattern of random dots and gradually alters that pattern towards an image when it recognizes specific aspects of that image [...read more](#)



"A photo of an astronaut riding a horse"

ML Researchers From Oxford Propose a Forward Mode Method to Compute Gradients Without Backpropagation

The amount of money and energy necessary to train AI models has become a hot-button issue as they grow in size. Leaders in the AI field have been pouring money towards training increasingly bigger models since GPT-3 proved the considerable gains in performance that can be achieved by merely increasing model size. However, this is prohibitively expensive, necessitates tremendous [...read more](#)

Public Figures



Andrew Ng: time for smart-sized, “data-centric” solutions to big issues

Did you ever feel you’ve had enough of your current line of work and wanted to shift gears? If you have, you’re definitely not alone. Besides taking part in the Great Resignation, however, there are also less radical approaches, like the one Andrew Ng is taking. Ng, among the most prominent figures in AI, is founder of LandingAI and DeepLearning.AI, co-chairman and

cofounder of Coursera, and adjunct professor at Stanford University. He was also chief scientist at Baidu and a founder of the Google Brain Project. Yet, his current priority has shifted, from “bits to things,” as he puts it [...read more](#)



Meta’s Yann LeCun on his vision for human-level AI

What is the next step toward bridging the gap between natural and artificial intelligence? Scientists and researchers are divided on the answer. Yann LeCun, Chief AI Scientist at Meta and the recipient of the 2018 Turing Award, is betting on self-supervised learning, machine learning models that can be trained without the need for human-labeled examples. LeCun has been thinking and talking about self-supervised and unsupervised learning for years. But as his

research and the fields of AI and neuroscience have progressed, his vision has converged around several promising concepts and trends. In a recent event held by Meta AI, LeCun discussed possible paths toward human-level AI, challenges that remain, and the impact of advances in AI [...read more](#)

MoroccoAI



Highlights



Prof. Yoshua Bengio

Full Professor at Université de Montréal

Cognitively-inspired inductive biases for higher-level cognition and systematic generalization

Humans are very good at out-of-distribution generalization (at least compared to current AI systems) and it would be good to understand some of the inductive biases they may exploit and test these theories by evaluating how they can be translated into

WATCH NOW

Building Research grounded products that impact billions of users

I will be sharing lessons from the past 5 years partnering with Google teams to build products that are grounded in the research and scientific breakthroughs coming out of DeepMind's research teams.

WATCH NOW



Mehdi Ghissassi

Head of Product Management at Google DeepMind

Artificial Intelligence: Unlocking Real Value Beyond the Hype.

From Virtual Assistants communicating with humans and offering relevant responses to their queries in real time, to data analytics tools amassing torrents of data and using deep learning to sift through them and recognize patterns, the Artificial Intelligence field ...

WATCH NOW



Prof. Hajar Mousannif

Associate professor at Cadi Ayyad University, Morocco.

How AI can Create Value for Corporates : History and Use Cases

Even if more and more companies are building Data Science teams internally, a lot of AI projects do not create as much value as expected; why so? And how concretely Data Scientists can create value for corporates, especially for non tech companies?

WATCH NOW



Dr. Halima Bensmail

Principal scientist at Qatar Computing Institute

Google Machine Learning Ecosystem for Research and Production

Kemal El Moujahid will introduce the Google Machine Learning ecosystem, and how it bridges the gap between Research and Production. Kemal will share how TensorFlow, JAX, TPUs, help researchers push the boundaries of ML, and empower developers to solve problems ...

WATCH NOW



Walid Daou

AI and Data Science Lead
OCP Group

Harnessing big 'Omics' data with ML and AI for disease signature discovery

Machine learning is becoming popular and frequently used to solve complex problems particularly in biomedical applications. In this talk we present and analyze three areas in which ML and AI have been used ...

WATCH NOW



Kemal El Moujahid

Product Director at
TensorFlow Google



Dr. Ulrich Paquet

Research Scientist
at DeepMind

AlphaZero: A Retrospective Story

As a chess-playing teenager in South Africa, I followed the match between Garry Kasparov and IBM's Deep Blue from a long distance. It was an exciting time and an exciting moment in the history of AI, computing and chess.

[WATCH NOW](#)

Morocco's Strategies and Policies to Leverage AI For Its Socioeconomic Development

Artificial Intelligence presents huge opportunities and an unprecedented potential for socioeconomic and sustainable development through the amazing tools it provides such as Machine / Deep Learning, that allow to get insight

[WATCH NOW](#)



Prof. Mohamed Essaïdi

Full Professor at
Mohamed V University



Prof. Ali Idri

Full Professor at ENSIAS and
Affiliate Professor at UM6P

Data Preprocessing in Medical Knowledge Discovery

Current information and storage technologies are resulting in the explosive growth of many business, government, and scientific databases. This has led to the development of advanced techniques and tools to assist humans extract useful information and make informed decisions from available data ...

[WATCH NOW](#)

Powering the Future of AI through Specialized AI hardware Accelerators

As a chess-playing teenager in South Africa, I followed the match between Garry Kasparov and IBM's Deep Blue from a long distance. It was an exciting time and an exciting moment in the history of AI, computing and chess.

WATCH NOW



Dr. Kaoutar El Maghraoui

Principal Research Scientist
at IBM Research AI



Dr. Salim Chemlal



Walid
Daou



Dr. Kaoutar El
Maghraoui



Kemal
El Moujahid



Dr. Halima
Bensmail



Mehdi
Ghissassi

Panel : Innovation and Bridging the Gap Between AI Research and Industry

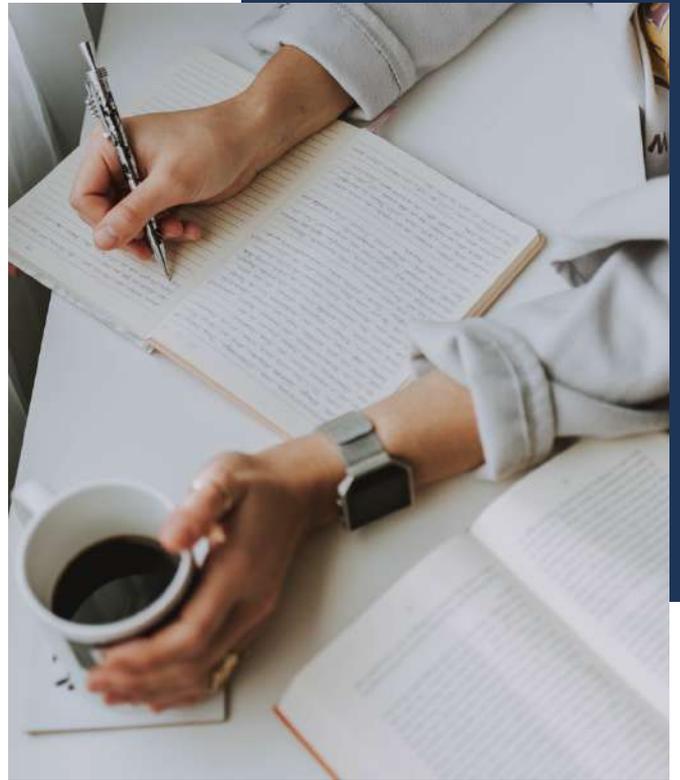
In this panel, Dr. Salim Chemlal and panelists discuss "Innovation and Bridging the Gap Between AI Research and Industry"

WATCH NOW

We'd love to hear from you

Send us your comments and suggestions about MoroccoAI Newsletter. This will surely help us make it even better for our community

team@morocco.ai



MoroccoAI Webinar

Human body and face Generation: A deep Learning Approach

Pr. Mohamed Daoudi
Professor of Computer Science at IMT Nord Europe
IJPR Fellow
IEEE Senior member
Douai, France

March 30th 2022
12h Morocco/3pm ET

MoroccoAI

STUDY GROUPS

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MoroccoAI

Morocco AI Annual Conference

December 28th 2021
8am CET - Online
conference@morocco.ai

- Data Challenge**: An opportunity to learn and test your Machine Learning skills on a real-life problem.
- Workshops**: Computer vision, natural language processing and more.
- Keynotes**: Lorem ipsum dolor sit amet.
- Panel**: For interesting magicians, sales gurus.

Learn: Learn the basic and advanced concepts of Machine Learning and Deep Learning.

Network: Network with Morocco AI community.

Meet: Meet AI experts including researchers, students and entrepreneurs.

Webinars

Study Groups

Conferences

Promoting excellence in AI education and research and connecting today's and tomorrow's AI leaders.

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