

April News | How Generative AI is changing the way businesses work | Artefact conference on Generative AI: videos & article

HOW GENERATIVE AI IS CHANGING THE WAY BUSINESSES WORK

Generative AI is profoundly transforming our social and economic environment. At the **Artefact Generative AI Conference**, held on April 20 2023, founders and experts shared their knowledge and exchanged ideas about the transition companies need to make to use this new technology to increase business productivity and augment workforce capabilities.

Generative AI will disrupt professions and organizations, creating new requirements in data governance and AIGen business solution design that must be addressed by decision-makers.

EXPLORING THE BUSINESS APPLICATIONS OF GENERATIVE AI

(For videos, you can enable subtitles in your language directly in YouTube)

Vincent Luciani, CEO and co-founder of Artefact

"We've already talked about augmented humans or augmented activities: soon we'll be talking about augmented businesses." He reminded the audience that "Despite the constant arrival of new AI applications, restraint is crucial: successful business transformation doesn't happen overnight, it requires reflection, research, preparation."

Hanan Ouazan, Partner Data Science & Lead Generative AI at Artefact, began with an overview of text models, beginning with Google's revolutionary 2017 "**Attention is all you need**" paper, which led to the creation of the Transformers which are the basis of almost all Large Language Models (LLMs) in use today. "As you know, research takes time, but today, we're in a period of acceleration where we're seeing new models every day that capitalize on greater access to data and infrastructure."

He explored several facets of the democratization and accessibility of generative AI models, highlighting the rapidity of the technology's adoption: "The pace is staggering: ChatGPT reached one million users in just five days."

With regard to LLM training method strategies, Hanan explained the advantages of pre-training, fine-tuning and prompt engineering, citing industrial use cases for each, and demonstrated Artefact's model strategy decision matrix. "It will certainly change our methods of working, but at Artefact, we don't think it will kill professions: it will augment the humans who practice them."

PEOPLE AND COMPANIES MAKING ADVANCES IN GENERATIVE AI

Artefact welcomed three guests with exceptional expertise in the field of Generative AI: Igor Carron, CEO of LightOn, Matthieu Rouif, CEO of PhotoRoom and Yohann Ralle, Generative AI Specialist at the French Ministry of Economy, Finance, and Industrial and Digital Sovereignty.

Igor Carron is the CEO & co-founder of LightOn, a French company behind the new Generative AI **platform Paradigm**, which is more powerful than GPT-3. "When we created LightOn in 2016, we were building hardware that used light to make calculations for AI. It was an unusual approach, but it worked – our Optical Processing Unit (OPU), the world's first photonic AI co-processor, has now been used by researchers worldwide and integrated onto one of the world's largest supercomputers.

LightOn brings customers the most advanced models to run servers and data while

guaranteeing data sovereignty for businesses. Igor explains: “The danger of sending your private data to a public API is that it will be reused to train successive models. So say people in the mining industry, who *literally* know where to find gold, send their technical reports to it.. In a few years, if you or anyone else asks ChatGPT-8 or -9, ‘Where’s the gold?’ It’ll tell you where the gold is!”

“Our Paradigm product lets clients manage their own data within their organizations so they can reuse it to train and improve their models.” Igor strongly recommends that companies begin using the data they generate internally to retrain their LLMs.

Matthieu Rouif is the CEO & co-founder of PhotoRoom, a solution that enables users to create studio-quality photos with a smartphone, using Stable Diffusion, a Generative AI technology for images. Thanks to the e-commerce marketplace explosion, two billion photos are edited every year. And the PhotoRoom app is playing a big part by automating clipping, shadow display, and realistic background generation to merchants.

“We use generative AI to offer clients photos that look like they’ve been taken by a professional photographer, even adding unique, realistic AI-generated backgrounds in less than a second,” says Matthieu.

Yohann Ralle is Generative AI Specialist at the French Ministry of Economy, Finance, and Industrial and Digital Sovereignty “The magic formula for building a state-of-the-art LLM = computational power + datasets + fundamental research,” explains Yohann:

“The State has invested in a digital commons, the **Jean Zay supercomputer**, designed to serve the AI community. It has enabled training of the European multilingual **BLOOM** model;

Initiatives such as **Agdatahub** have helped to aggregate, annotate, and qualify learning and test data to develop efficient and trustworthy AI;

National strategy has helped structure the AI research and development ecosystem, with the creation of the **3IA institutes**, funding of doctoral contracts, IRT Saint Exupéry and SystemX project launches, student training programs and much more across France and Europe.”

GENERATIVE AI ROUND TABLE DISCUSSION: FROM TECH TO BUSINESS USE CASES, JOBS AND ETHICS

An exciting debate with our speakers was led by Vincent Luciani, CEO of Artefact. Here is the list of questions he asked:

What are the limitations around sovereignty and regulations for these models?

With more and more LLMs being built, do you think there will be a GPU "war"? Where do you find the most value? Open source models? LLMs?

READ SUMMARY

And here's a sampling of some key questions and answers from panelists:

What are some of the most promising use cases for companies?

– Hanan: "Chatbots are always going to be an important use case because in 48 hours you can set one up by connecting it to a database, it's amazing…"

– **Yohann**: "I see lots of opportunities for ChatGPT-powered plugins, like Kayak or Booking."

– **Igor**: "I think we'll see personalization and customization of search engines."

How is generative AI being used in companies today? Is it affecting employment?

– **Matthieu**: "We encourage its use. Our tech team uses Copilot for development, and our coders use both ChatGPT and Copilot."

– **Yohann**: Ten years ago a US study said 47% of jobs would be lost to AI, but it never happened. People always panic a little when a new technology arrives…"

With so many LLMs being built, do you think there will be a GPU shortage?

– **Yohann**: "It's a real risk. Right now, there's an NVIDIA monopoly here, they control the market and prices. There are no real competitors in Europe, unfortunately. It's serious."

– **Matthieu**: "The lack of availability of GPUs limits not only our productivity, but the growth of companies everywhere in Europe."

ARTEFACT WILL BE PRESENT AT VIVA TECHNOLOGY, EUROPE'S BIGGEST INNOVATION AND TECH EVENT

Artefact will welcome you to its booth M20, Hall 1, at VivaTech that will be held from June 14-17 in Paris. VivaTech is Where Business Meets Innovation: **91,000 attendees from 146+ countries are expected**.

Artefact will host conferences every hour on its booth and will demonstrate many innovative Generative AI solutions.

– The first three days, presentations will focus on how Artefact's AI solutions bridge the gap between data and businesses to deliver tangible value.

– On June 17th, Artefact conferences will address individuals on recruitment, Women in Tech and the Artefact School of Data educational programs.

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