PROF. ADRIANO MUSSA, PhD

IA GENERATIVA

AFINAL, O QUE É INTELIGÊNCIA ARTIFICIAL?

A (Input)

- E-mails
- Áudio
- Para onde vai?
- Propagandas + Informações de usuários
- Cadastro + navegação
- Fotos de produtos finalizados
- Pergunta

INTELIGÊNCIA ARTIFICIAL (PREDIÇÃO)

B (Output)

- Spam? (S/N)
- Textos
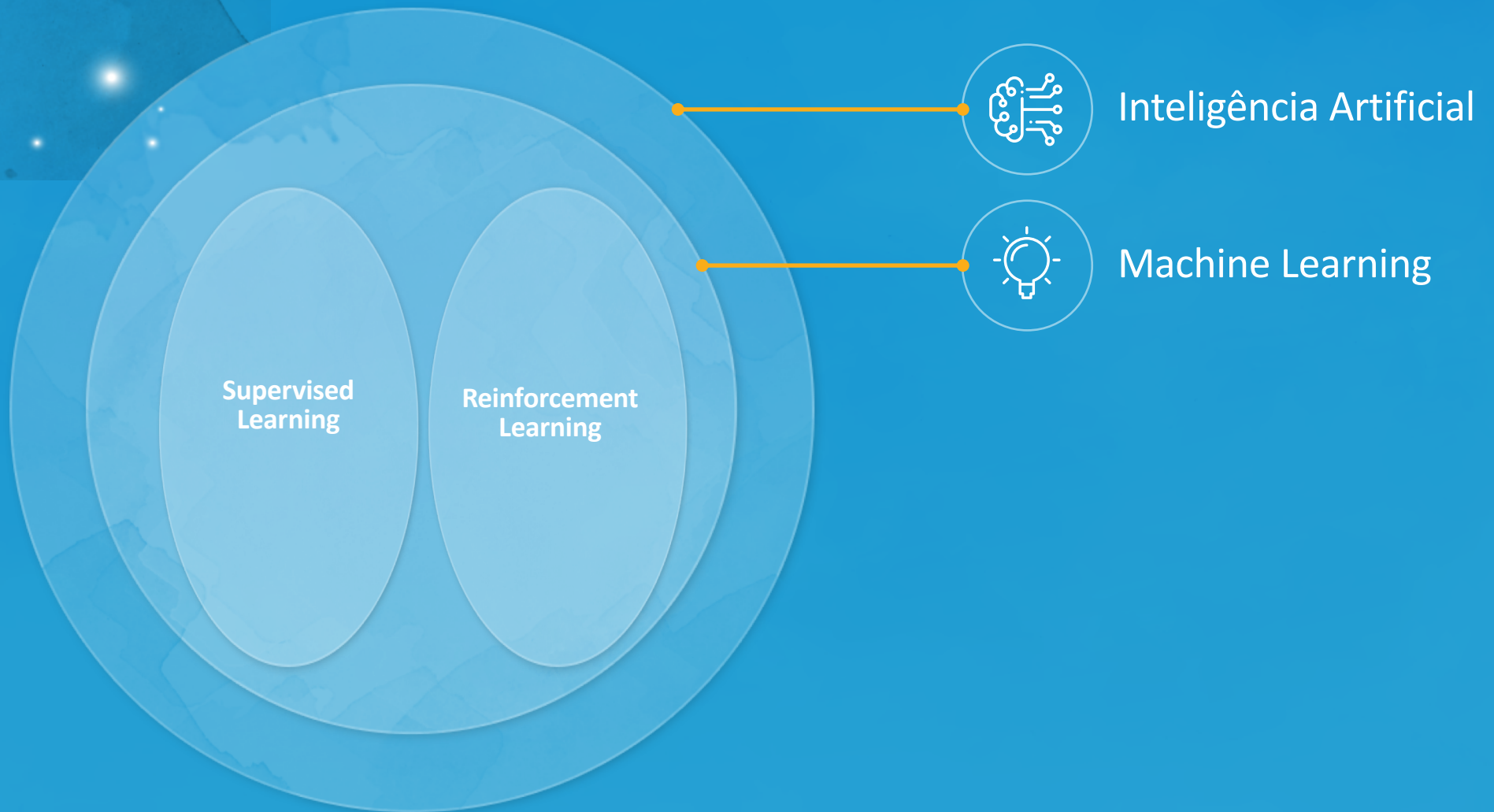- Melhor caminho
- Click? (S/N)
- Feed personalizado
- Defeito? (S/N)
- Resposta

EM UMA EXPRESSÃO...

IA = MÁQUINA PREDITIVA

Inteligência Artificial

Machine Learning

Supervised Learning

Reinforcement Learning

IA GENERATIVA

"Qualquer tecnologia suficientemente avançada é indistinguível da magia"
Arthur Clarke

- **Algoritmos "criam" conteúdos usando o que aprenderam com *data sets* já existentes.**

- **Ainda é pura predição, probabilística**

- **Exemplos: Chat-GPT, Dall-E, Midjourney, Stable Diffusion, *and counting...***

- **2022: investimentos de pelo menos US$ 1,4bi em organizações de IA generativa (PitchBook)**

BASE10 TREND MAP: GENERATIVE AI

Base¹⁰

Companies are grouped based on medium produced and segmented by use case within each medium. Companies that offer products across segments are grouped in the segment of the core product offering.
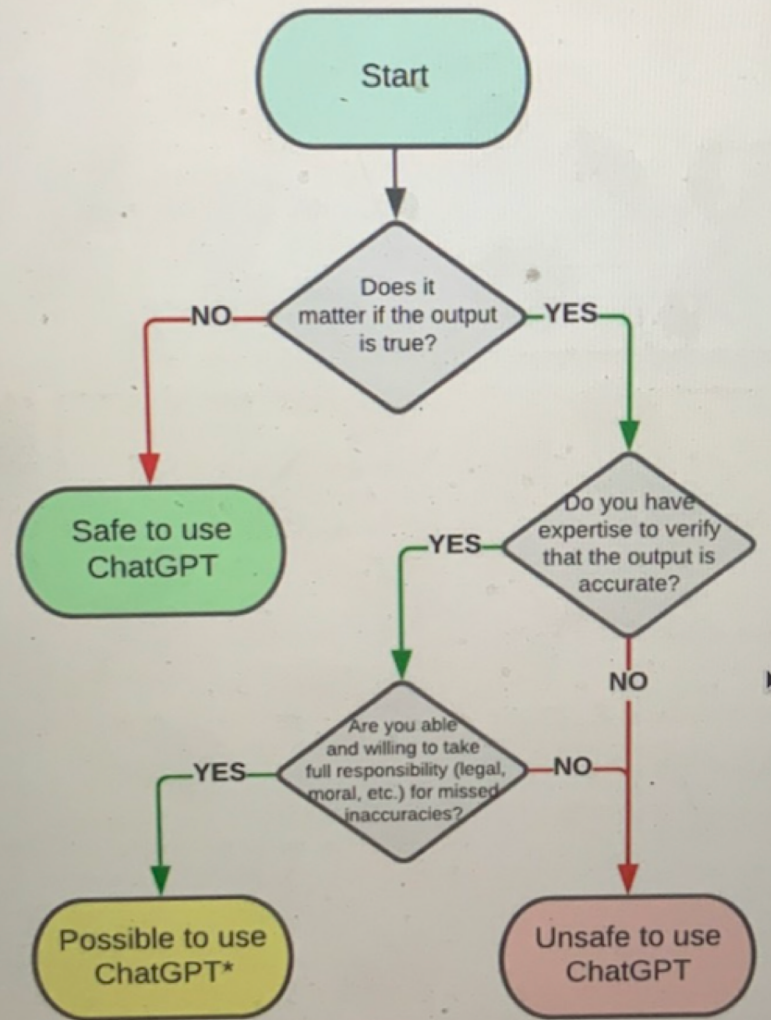
Chat-GPT

- **O membro mais famoso da família IA GENERATIVA**

- **Baseado nos modelos "Transformers" (Google Brain, 2017)**

- **Preditor de textos, prediz o próximo *token* em uma sequência**

- **Usa relações estatísticas entre palavras inseridas, para acertar quais viriam a seguir**

- **Modelo matemático capaz de produzir textos longos, coerentes e consistentes**

Is it safe to use ChatGPT for your task?
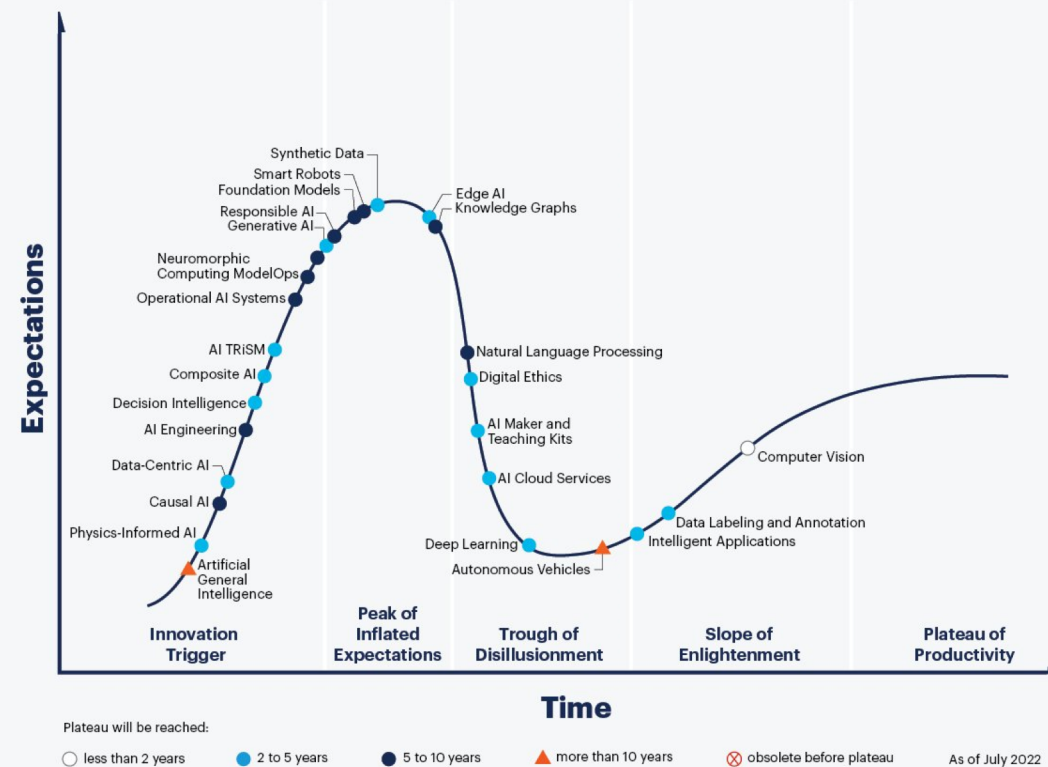
Aleksandr Tiulkanov | January 19, 2023

Propriedade intelectual de Adriano Mussa

DESAFIOS DA IA GENERATIVA

É PRO-BA-BI-LÍS-TI-CO!

Não é preciso.

Potencial de uso nas organizações

Hype Cycle for Artificial Intelligence, 2022

Potencial de uso nas organizações

There are many possible generative AI use cases across the business that could create early impact.

Example use cases[1] (not exhaustive)

Marketing and sales	Operations	IT/engineering	Risk and legal	HR	Utility/employee optimization
Write marketing and sales copy including text, images, and videos (eg, to create social media content or technical sales content)	**Create or improve customer support chatbots** to resolve questions about products, including generating relevant cross-sell leads	**Write code and documentation** to accelerate and scale developments (eg, convert simple JavaScript expressions into Python)	**Draft and review legal documents,** including contracts and patent applications	**Assist in creating interview questions for candidate assessment** (eg, targeted to function, company philosophy, and industry)	**Optimize communication of employees** (eg, automate email responses and text translation or change tone or wording of text)
Create product user guides of industry-dependent offerings (eg, medicines or consumer products)	**Identify production errors, anomalies, and defects** from images to provide rationale for issues	**Automatically generate or auto-complete data tables** while providing contextual information	**Summarize and highlight changes** in large bodies of regulatory documents	**Provide self-serve HR functions** (eg, automate first-line interactions such as employee onboarding or automate Q&A or strategic advice on employment conditions, law, regulations, etc)	**Create business presentations** based on text prompts, including visualizations from text

McKinsey: Generative AI is here: How tools like ChatGPT could change your business, December 20, 2022

Aplicações e casos de uso

- **Microsoft 365 CoPilot:**
  https://www.youtube.com/watch?v=S7xTBa93TX8

- **Uso do Chat-GPT 4 no Duolingo:**
  https://www.youtube.com/watch?v=DVpz9WDwKVQ

- **Vídeo de funcionamento do DALL-E:**
  https://www.youtube.com/watch?v=qTgPSKKjfVg

Extra:
- **Khan Academy: https://www.youtube.com/watch?v=rnIgnS8Susg**

Plug-in:
- **Expedia: https://www.youtube.com/shorts/U1YE0kHOsdQ**
- **Análise de PDFs: https://askyourpdf.com/**
- **Chat-GPT dentro do Google Sheets: https://www.sheetai.app/**

Além da Open.AI

- **Conversor de vídeos em textos: https://anthiago.com/transcript/**

- **Criação de músicas customizadas: https://www.beatoven.ai/**

- **Criador de posts para mídia social: https://pt.adcreative.ai/**

- **Transformador de vídeos em "shorts": https://www.clip.fm/blog**

Além da Open.AI

- **Gerador de ideias:**
https://seenapse.it/

"How can I improve our students' engagement and try to create a sense of community among them?"

1.What if we held a student-led debate about different forms of government and let them engage with each other to discuss the pros and cons?
2.What if we created a virtual community for our students that celebrated their uniqueness and helped them share their stories?
3.What if we create a virtual monument in memory of those students, and invite our students to contribute artwork or stories that honor the legacy they left?
4.What if the students could write poems or short stories based on their experiences in the community, and then have them printed as a book?
5.What if we create a platform for our students to share and discuss their experiences with gender identity, sexuality and relationship issues? That could help foster greater understanding and community among them.
6.What if we create an app just for our students, with a community aspect, so they can feel like part of the school family?
7.What if we created a virtual space for the students, where each one of them could 'spiral in', like bullets in a gun barrel, and be connected with their peers?
8.What about creating an online game that combines some of the elements of Argentinean Tango, and use it to engage students?
9.What if we created a nurturing space, in which students could come together to learn and explore new ideas? We could even give them access to resources such as books or online courses that they can use.
10.What about creating a system where the students can enter their own details and create personalized avatars, which will represent them in online activities? The more active they are, the more rewards they get.

Consciência de uso...

LIMITAÇÕES DA IA GENERATIVA

HOJE, os custos são elevadíssimos para Open.AI, para as organizações e, potencialmente, para os usuários finais!!

https://www.cnbc.com/2023/03/13/chatgpt-and-generative-ai-are-booming-but-at-a-very-expensive-price.html?__source=sharebar%7Clinkedin&par=sharebar

Brincando de "futurologia"...

"...AI models, including GPT-4 and other anticipated software tools, would heavily affect 19% of jobs, with at least 50% of the tasks in those jobs exposed"

"The optimistic view: it will prove to be a powerful tool for many workers, improving their capabilities and expertise, while providing a boost to the overall economy."

"...a more positive possible outcome: generative AI could help a wide swath of people gain the skills to compete with those who have more education and expertise. The preliminary findings suggest that ChatGPT and other generative AIs could, in the jargon of economists, "upskill" people who are having trouble finding work..."

"The pessimistic view: companies will simply use it to destroy what once looked like automation-proof jobs, well-paying ones that require creative skills and logical reasoning; a few high-tech companies and tech elites will get even richer, but it will do little for overall economic growth."

"Tech-savvy workers and companies could quickly take up the AI tools, becoming so much more productive that they dominate their workplaces and their sectors. Those with fewer skills and little technical acumen to begin with would be left further behind."

Brincando de "futurologia"...

"Companies can decide to use ChatGPT to give workers more abilities—or to simply cut jobs and trim costs"

Rotman, D. Com a colaboração de diferentes pesquisadores. ChatGPT is about to revolutionize the economy. We need to decide what that looks like. MIT Tech Review, 2023

Muito provavelmente você (e eu) não seremos substituídos por uma IA. Entretando, altas são as chances de sermos substuídos por alguém que sabe usar IA melhor do que nós.

O CHAT GPT É...

Um colega de trabalho que **VOCÊ LIDERA**, cujas características e pontos mais marcantes são:

• Tem a maior biblioteca do mundo (quase a Web inteira) na cabeça, uma memória infinita, com uma velocidade impressionante;
• Excelente em linguagem;
• Multipolar, tem múltiplas personalidades e pode atuar e simular incontáveis papéis;
• Poliglota;
• Bom de papo para aguçar a sua criatividade e ideação;
• Excelente verificador de plágio;
• Bom Codificador;
• Ruim com referências;
• Mais generalista do que especialista, portanto, não é profundo em nada;
• Precisa e gosta de feedbacks detalhados, diretos e claros.

E MUITO, MUITO, MUITO ARROGANTE E PREPOTENTE, lhe dá respostas certas e erradas com a mesma confiança!