



art by Dall-E 2

Intro to Artificial Intelligence

For Small Business



qosmic
technology consulting

hello@qosmic.tech

What kind of moment is AI?

2000s: iPhone vs. Blockchain

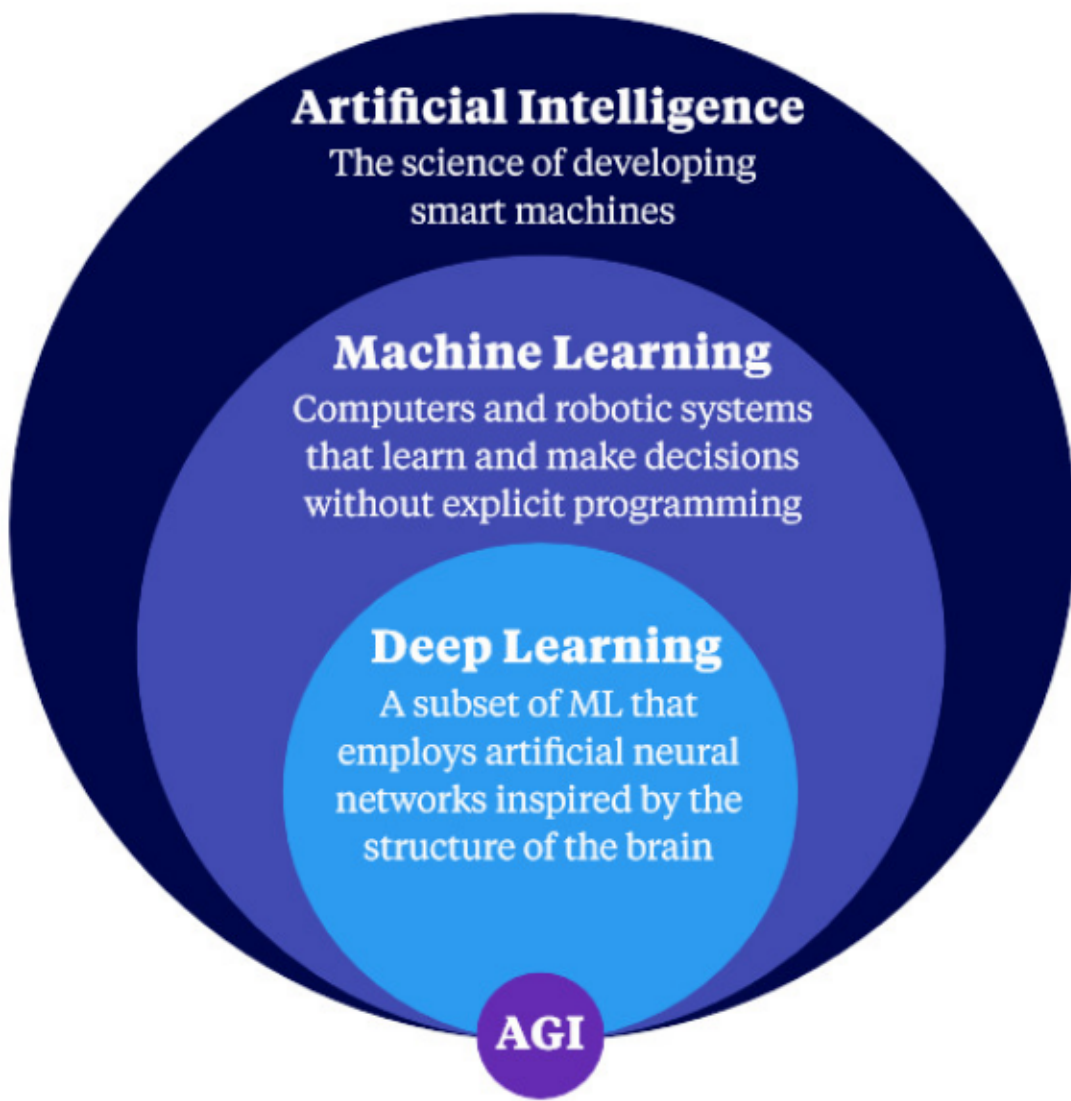
1990s: The internet vs. Y2K bug

1980s: The PC vs. The "paperless office"

Goal

- 1) To clarify the potential impact of AI on small business (without resorting to descriptions of "Generative Adversarial Networks")**
- 2) To provide practical next steps for business people and business owners**

What is AI?



Specific

Deep Blue (1997)

Stockfish (2008)

AlphaGo (2015)

AlphaZero (2017)

ChatGPT-1 (2018)

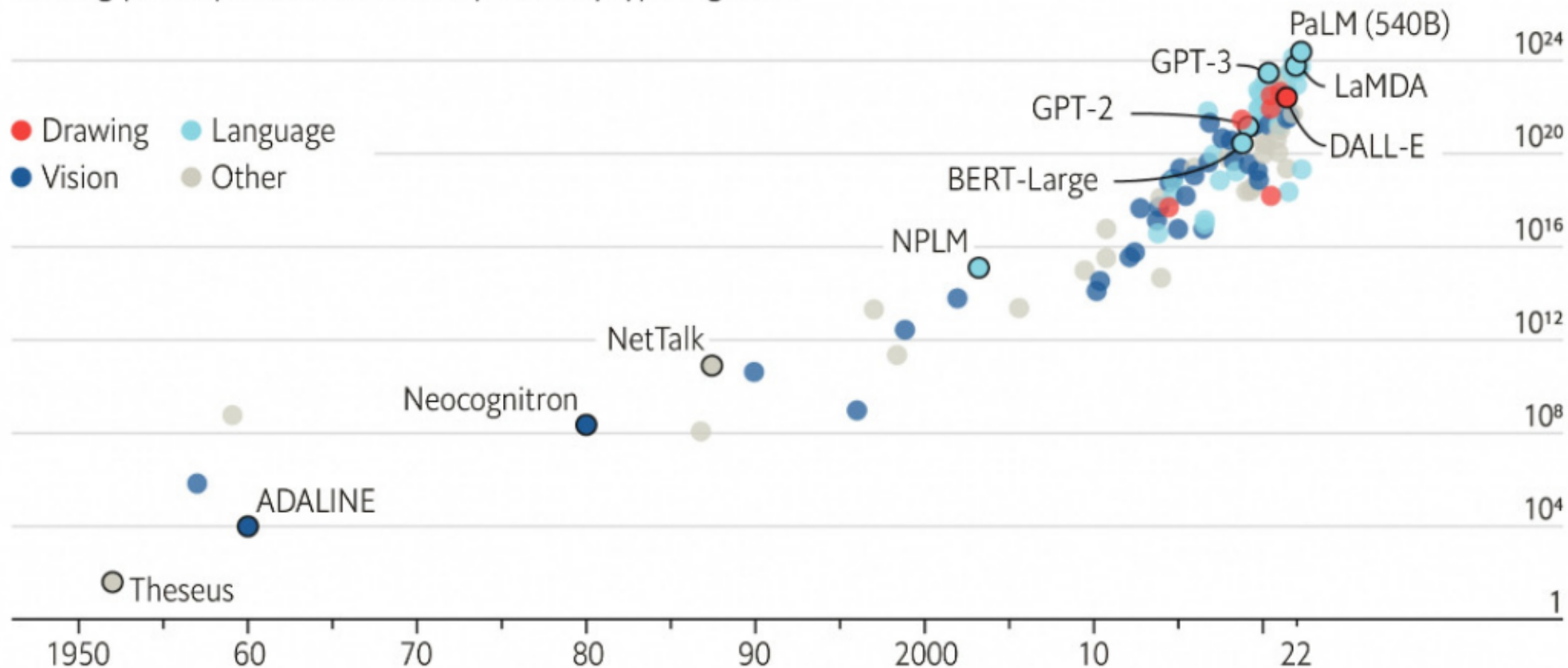
ChatGPT-3.5 (2022)

ChatGPT-4 (2023)

General

Inflection Point

Floating-point operations, selected systems, by type, log scale



Sources: "Compute trends across three eras of machine learning", by J. Sevilla et al., arXiv, 2022; Our World in Data

What AI is not.

A supercomputer or quantum computer.

Artificial consciousness.*

Just another tool.

Infallible.

Unbiased.

Is AI a Boon or Threat?

No agreement among the experts

The 2018 ACM Turing Award was shared by three long-time collaborators known as the "Godfathers of AI":



AI

1,100+ notable signatories just signed an open letter asking 'all AI labs to immediately pause for at least 6 months'

Connie Loizos @cookie / 1:09 AM CDT • March 29, 2023

Comment

Sam Altman pleads with Congress to regulate 'increasingly powerful' A.I. systems like his ChatGPT

BY MATT O'BRIEN AND THE ASSOCIATED PRESS

May 16, 2023 at 8:57 AM CDT



nology ▾



Disrupted



U.S. Chamber of Commerce calls for AI regulation

Reuters

March 9, 2023 3:55 PM CST · Updated 3 months ago

Both Boon & Threat

Highly unusual for business leaders to call for regulation. **HOWEVER...**

Is that a measure of the threat of AI... or the threat of **open source** AI?

Okay . . .
but what
about my
job???

Labor Impact:

Think in terms of **function**,
not **occupation**.

AI doesn't automate roles.

It automates functions.

Don't judge by job title or industry.

Think about the functions your role performs and how they might or might not be automated.

That gives a sense of overall risk.

However, it does not speak to timing.
Timing will depend on many factors.

What is AI Good At?

1) Repetition

- Machines generally excel at doing things over and over and over and over and over.....

2) Rules

- Guidelines that can generally be given the form:
 - (If x Then y Else z)
- Rules don't have to be rational. They just have to be *explicable*.
- *Examples:* Spelling, grammar, and syntax. Laws and regulations. Legal procedure. Sports and game rules. HR policies. Safety protocols. The tax code. GAAP.

What is AI Bad At?

1) Invention

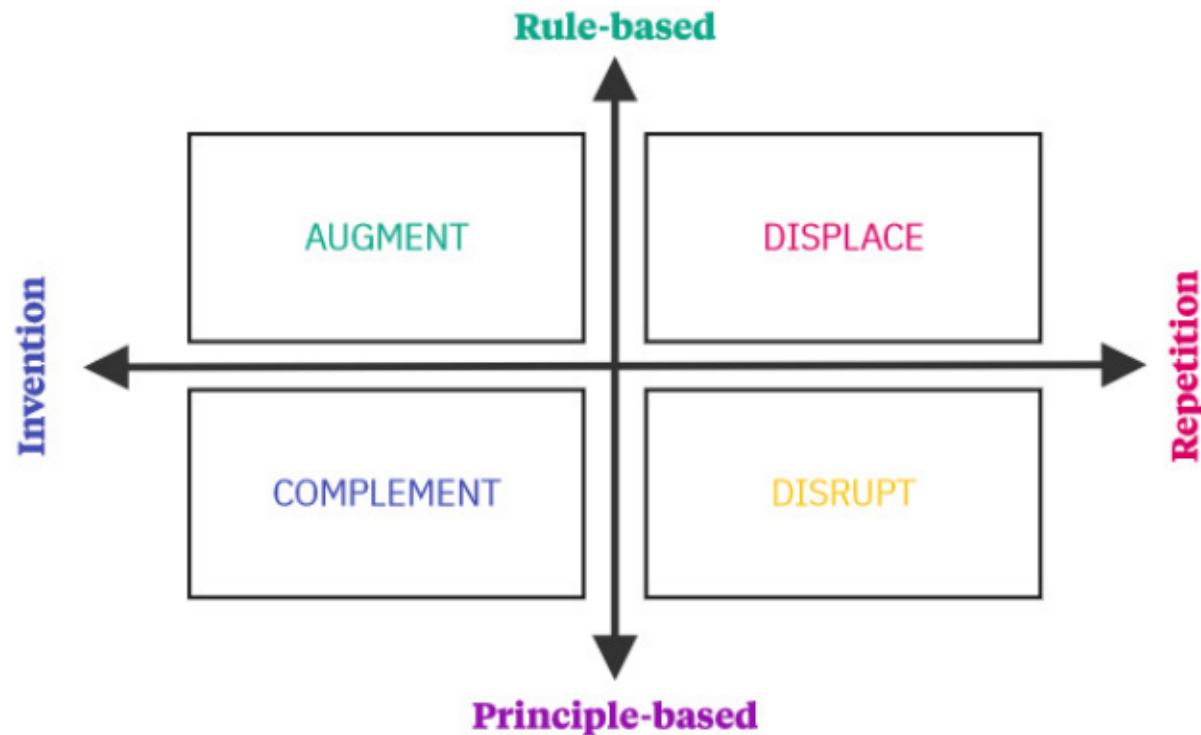
- Machines struggle to connect concepts whose relationship hasn't already been mapped, directly or indirectly.
- The art and text that AI is now developing is *mimicry*.
- AIs are trained on an ENORMOUS data set which they use to dynamically map your query to a response.
- Any creativity is in the data set.

2) Principles

- Flexible, contextual, high-level guidelines, beliefs, or values that shape the approach to work and provide a framework for decision-making.
- Generally cannot be contained in an If/Then statement.
- *Example:* The Hippocratic Oath. The Geneva Conventions. The IEEE Code of Ethics. The Belmont Report.

Invention vs. Repetition

Rule-based vs. Principle-based



DISPLACE

The forced or involuntary movement of individuals or communities from their habitual surroundings.

DISRUPT

The act of causing significant disturbance, interruption, or change to an established system, process, or status quo.

AUGMENT

To enhance, supplement, expand, or improve upon the existing state or capabilities of something.

COMPLEMENT

To support or add value to an entity that is defined in a different set.

Important Caveats

1) Labor Market Only

- AI will have a significant impact in many areas of life and business, including war, politics, and human relationships
- Here, we are simply looking at the effects on labor

2) Time-independent

- Current state and market factors will determine timeline

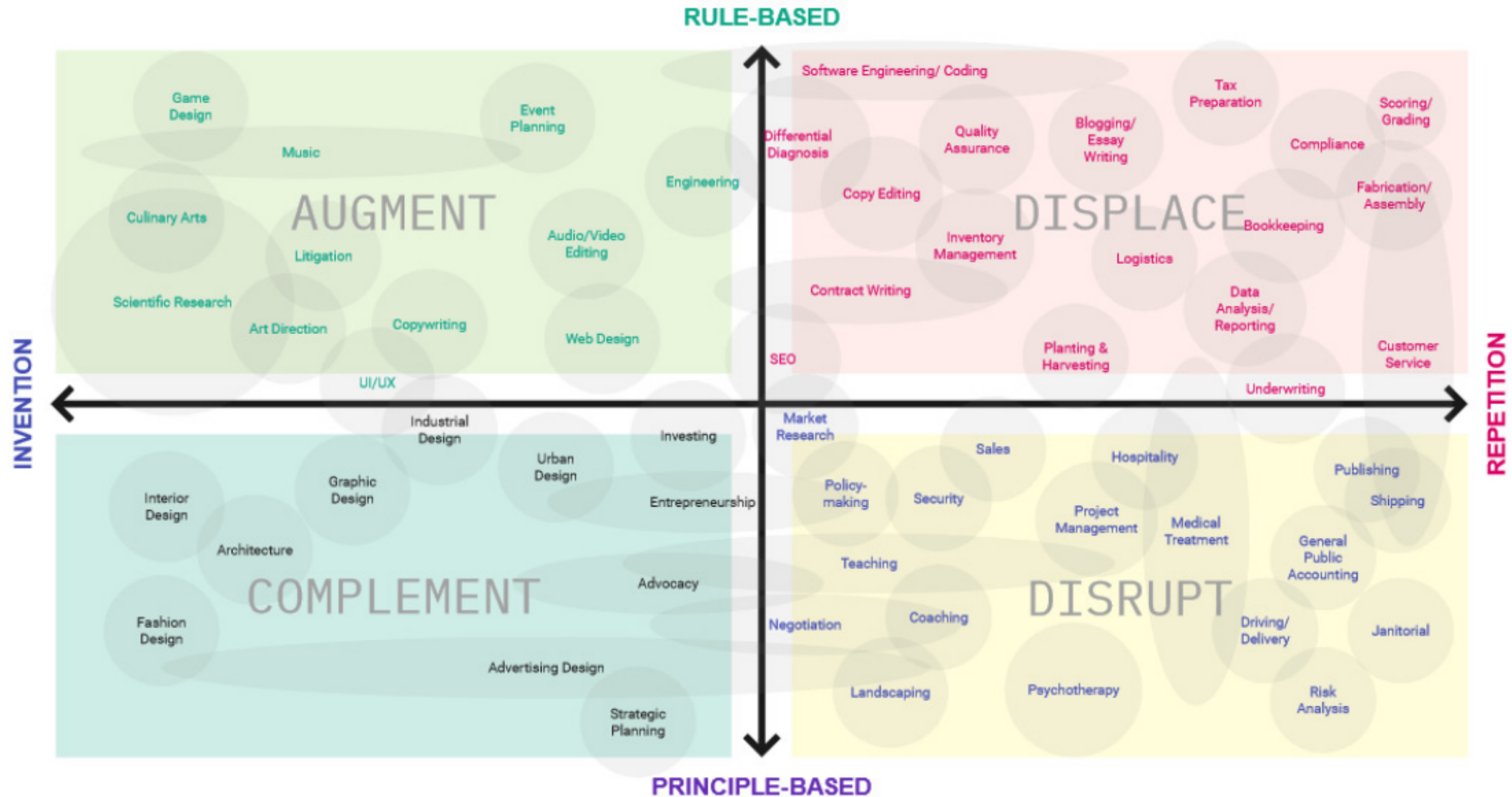
3) Actual Results Will Vary

- No one can predict the future, least of all me

4) Not Exclusive

- There are many other ways of measuring impact

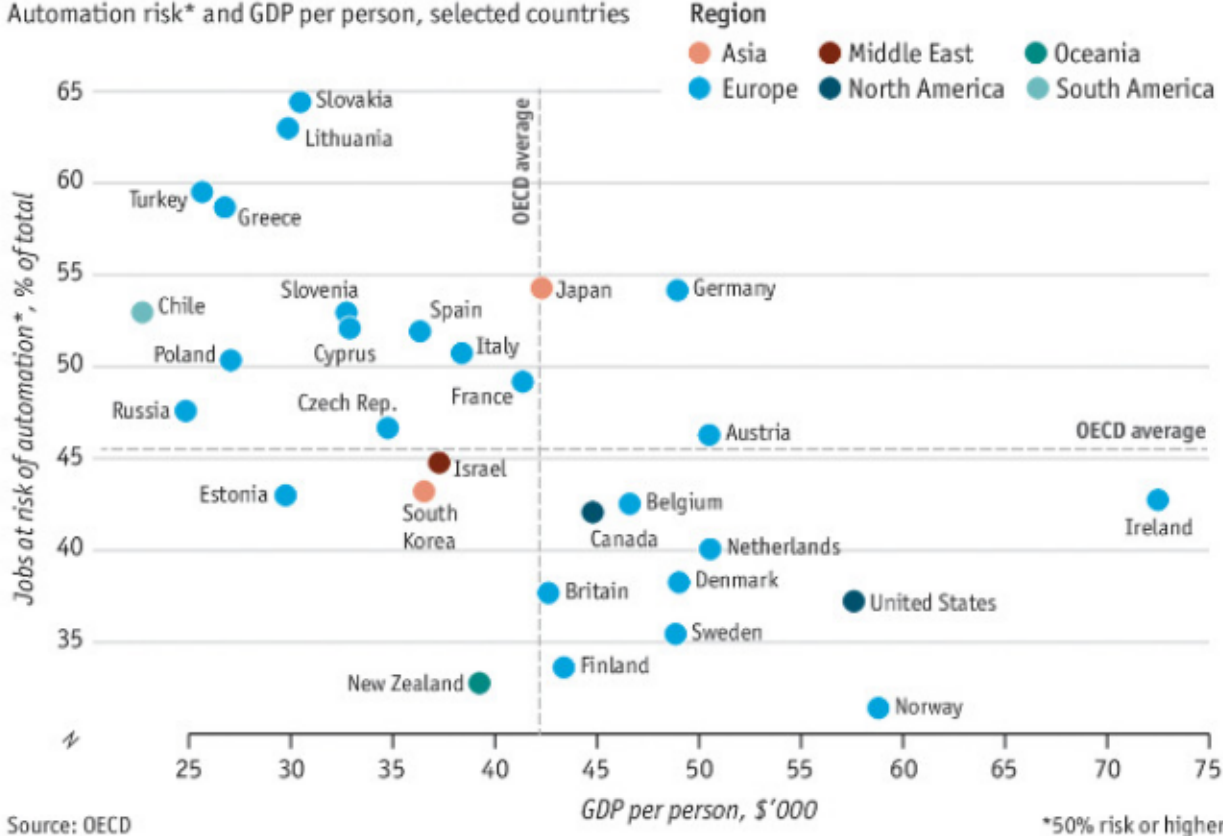
AI Effect on Work Function



The International Outlook

Wage against the machine

Automation risk* and GDP per person, selected countries



For Business People

Focus on the **functions** that make up your job, not your job title or industry.

- *Example:* If you work for an interior design firm but your job is primarily bookkeeping, the effect of AI on the company will be different than the effect of AI on YOU.

Ask yourself:

How much of what I do falls in each grid?

Remember: This is only looking at **risk**. It's not predicting an outcome and it doesn't speak to timing.

- *Example:* Even for jobs at long-term risk, the actual time until significant effects are felt in the market depends on the current state of the industry--e.g., Forestry.

Finally, don't forget second-order effects of disruption or displacement:

- *Example:* If trial law is perceived to be a "safe" job, the legal field might see an influx of refugees from other industries that could drive down wages.

For Business Owners

First Myth: AI will only impact large companies.

Relative ease of adoption and overall significant impact suggests the SMB space--which is traditionally undercapitalized, risk averse, and highly sensitive to changes in the labor market--may be the first to feel the squeeze.

Even if AI is unlikely to significantly impact your production line, that doesn't mean you won't lose competitive advantage without it.

Example: A boutique bakery, which we don't traditionally associate with technology, might leverage AI tools to:

- personalize the customer experience
- automatically create and share content on social media and interact with customers (and potential customers)
- create smart pricing and offer dynamic discounts
- effectively forecast demand and manage inventory

For Business Owners

Second Myth: You can go "from zero to AI."

Most AI tools, especially at first, will require a minimum existing "tech stack."

- That stack does not have to be expensive.
 - *Example:* Spreadsheets & Email vs. CRM/ERP
- If missing, you are financing a technical debt and are already behind.

If your margin leaves no room for investment, you may be among the first to feel the effects of this shift.

From ChatGPT: *"Overall, early adoption of productivity-enhancing technologies has historically provided firms with market advantages by enabling them to improve efficiency, reduce costs, enhance product quality, and respond to changing market demands... However, technology adoption alone may not guarantee success if firms fail to effectively integrate the technology into their operations or adapt their business strategies accordingly."*

What Do I Do?

Step 1) Evaluate your risk

- You now have a rubric, *HOWEVER...*
- This is not the only one available
- Compare the lead time in your industry to the time required for you to be ready

Step 3) Come up with a plan

- Even if that plan is "wait and see," document all your reasoning and assumptions (you won't remember later)
- This makes Step 4 easy

Step 2) Own your strategy

- The AI space is *EXTREMELY* fluid
- Seek help if you need it, but don't rely on experts
- It's your decision

Step 4) Reevaluate periodically

- Did I mention things are changing rapidly?
- Be aware a storm is raging and periodically lift your head to make sure it's not heading your way

"The future is already here – it's just not evenly distributed."
-William Gibson

Questions?

Reach out
`hello@qosmic.tech`



art by starry.ai from a prompt by ChatGPT