



8 Questions to Ask Before Jumping Into AI

Revelry

AI Market At-A-Glance

When most people today think of artificial intelligence (AI), they're thinking of generative AI... large language models (LLMs) like ChatGPT, Bard, Claude, and Anthropic. It's what dominated the news throughout 2023. It's what continues to grab headlines and encourage business leaders to rethink things like customer support and operational efficiency.

But AI is much broader - and if your company is among the 93% that plan to increase AI spending in the next 12 months, here are just a few of the things you should know about the AI market.

AI includes technologies like:

Machine Learning - Algorithms designed to improve and adapt their performance through exposure to new data. For example, recommendations that improve and change with behavior: Netflix, Instacart, Instagram

Computer Vision - Enables software to derive information from images. For example, facial recognition on iPhones.

Natural Language Processing - Gives computers the ability to interpret, manipulate, and comprehend human language.

The Global AI market expected to grow at a CAGR of 36.8% between 2023 and 2030 - from \$150.2B to \$1,345.2B.*

93% of companies plan to increase AI spending in the next 12 months.

- LucidWorks, July 2023

What's fueling the rapid growth and accessibility?

- Data availability
- Advancements in algorithms
- Computing Power

Generative AI

The generative AI market alone projected to reach \$191.8 billion by 2032 - up from \$10.5 billion in 2022 (CAGR of 34.1%)*

Industry leaders include:

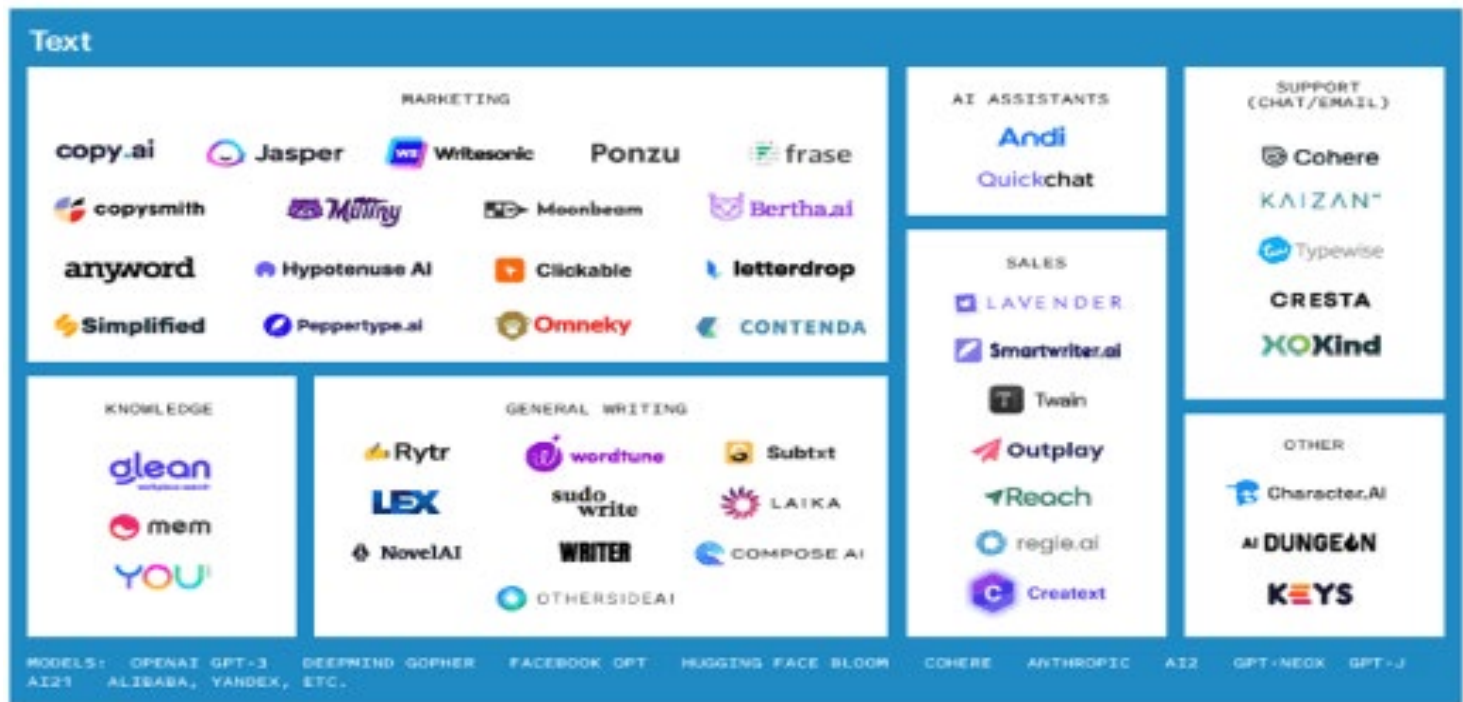
- Entertainment
- Media
- Consumer products
- Tech

U.S. companies betting big on AI include Microsoft, Google, Meta, Apple, Amazon, and Netflix, among many others.

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A Slice of the Generative AI Market

The generative AI market is evolving at a rapid pace – growing daily – and it can be overwhelming.



Sequoia Capital, April 2023

And Another Slice...

Image

IMAGE GENERATION

- Midjourney
- OpenArt
- crayon
- PLAYGROUND
- Wondershare
- PhotoRoom
- > ROSEBUD.AI
- atpaca
- Lexica
- Nyx • gallery
- image.space
- KREA
- artbreeder

CONSUMER/SOCIAL

- Midjourney

MEDIA/ADVERTISING

- SALT
- THE CULTURE DAO

DESIGN

- Diagram
- vizard
- VIZCOM
- Aragon
- Poly
- market
- INTERIOR.AI
- CALA

MODELS: OPENAI GPT-3, STABLE DIFFUSION, CRAYON

Code

CODE GENERATION

- GitHub Copilot
- replit • GhostWalter
- tabnine
- MUTABLEAI

TEXT TO SQL

- AI2SQL
- seek

WEB APP BUILDERS

- Debuild
- Enzyme
- durable

DOCUMENTATION

- Mintlify
- Stenography

OTHER

- excel/ormulabot

MODELS: OPENAI GPT-3, TABNINE, CODESEEK

Speech

VOICE SYNTHESIS

- RESSEMBLE.AI
- broads
- WELLSAID
- COQUI
- podcast.ai
- descript overdub
- Fliki
- Listnr
- REPLICA
- VOICEMOD

MODELS: OPENAI

3D

3D MODELS/SCENES

- mirage
- CSM

MODELS: SPHARMVISION, NVIDIA OCEAN, PBR, APPLE ML

Other

MUSIC

- SPLASH
- Mubert
- AI2Music
- Endel
- boomy
- Harmonai
- SONIFY

GAMING

- DUNGEON

RPA

- Adept
- maya

AI CHARACTERS/AVATARS

- Character.AI
- inworld
- The Sandbox
- OASIS

BIOLOGY/CHEMISTRY

- Cradle

VERTICAL APPS

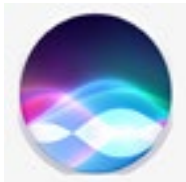
- Harvey

MODELS: OPENAI, HUBOTON

Sequoia Capital, April 2023

BUT... AI Isn't New. It's Just More Accessible.

Here are just a few examples of long-loved, AI-driven tools:



VIRTUAL ASSISTANTS

Use NLP, ML, statistical analysis, and algorithmic execution to decide what you are asking for and try to get it for you



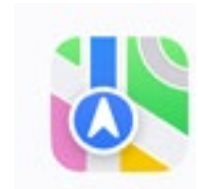
CHAT BOTS

Programmed algorithms enable machines to answer frequently asked questions, take and track orders, and direct



SEARCH & RECS

Data collected on the front end and stored and analyzed through ML. It is then able to predict your preferences



MAPS & NAV

Using ML, algorithms remember edges of buildings it's learned, allowing for better map visuals, and recognition and understanding of house/building #s

AI And Your Tech Strategy

We know AI can support business in at least three specific ways, including:

- Improving operational efficiency
- Enhancing customer experiences
- Driving innovation

But there are other important things business leaders need to understand before investing in AI, say our authors. Begin by asking and answering these eight questions:

1

What do you know? What do you not know?

Make sure you have enough information to make decisions about using AI. You don't have to be an expert, but **be educated**. Be sure to:

- Identify blind spots.
- Pull in in-house experts, if you have them.
- Engage a trusted partner, if needed.

2

What business or customer problem(s) are you trying to solve, and how can AI be leveraged?

Look at your business goals and challenges, and then reconsider potential solutions through the lens of AI. An important reminder: **Don't buy a hammer and then look for nails to hit. Apply the hammer to nails that need to be hit.**

3

Where are your operational inefficiencies and can AI be used to speed things up?

AI can be a great option for accelerating and automating tasks. In fact, according to Goldman Sachs, **generative AI will boost U.S. productivity by 1.5% per year over the next 10 years.**

4

How might AI initiatives fit into your existing technology or product roadmap?

Are there initiatives that can be delivered faster with an AI solution? For example, there are companies creating user personas and artificial testers – essentially AI-powered testing – that could increase your speed to market by weeks or even months.

5

Taking into account all info gathered to this point: What does the total risk-reward picture look like?

Given AI's momentum, it may be a risk to NOT get started, even if you start small, which is often a good idea. The key is to get educated, make a plan, and take that first step. **Note: If you're in a highly regulated industry, you should loop in your Legal team about industry-specific risks.**

Best Practice: If you're not already doing so, create space and budget for innovation in your technology roadmap (separate track, dedicated team, or percentage time).

So, You're Going for It! Congratulations!

Don't Skip Discovery.

Discovery is the phase in which you test your assumptions, validate your idea, and define your project by:

- Clarifying project goals
- Analyzing the target market (i.e. get to know the end user)
- Defining the product-market fit
- Gathering all project requirements

Discovery is essential to any project, but don't think of it as sequestered research and documentation. **Discovery is a team sport**; make sure your engineering stakeholder and partners are part of the process.

Why take Discovery seriously? Discovery helps ensure the product actually meets your needs. It also helps you identify risks sooner rather than later, and it informs your project roadmap or plan of attack – what to do first, what to save for later, what you should consider an MVP.

Discovery, especially when you're working with a new technology, can involve prototyping (i.e. trying different approaches). **Adopt a test and learn mentality to help to ensure you don't get locked into analysis paralysis.**

Remember, Discovery can be an ongoing process, so it's best to adopt a learn and adapt mentality.

Foundational Engineering Questions

Continuing with our questions – with the assumption you’ve asked and answered questions 1-5 AND started working through Discovery...

6

What will be your anchor technologies, and what will be your softer bets?

Think of Jeff Bezos’s Type 1 and Type 2 decisions: Type 1 decisions set you on a path that’s hard to turn away from, while Type 2 decisions are easy to reverse. You don’t want to agonize and delay over Type 2 decisions that can be changed later, and you also don’t want to make a hard-to-reverse Type 1 decision on a whim.

According to our authors, in some of Revelry’s early AI exploration, we chose:

Anchors: Elixir, Phoenix, Postgres

Why: Concurrency, fault tolerance, fast development time

Soft Bets: OpenAI, Pinecone.io

Why: Move fast now, plug in other things later

7

Will you “buy” or build your model?

Before you can decide whether to build or buy, it’s important to understand the kinds of models out there and what they’re good for.

Large language models (LLMs) – Understanding and generating English

- Text generation
- Language translation
- Answering queries
- Code generation

Traditional machine learning (ML) models – Better for numerical and structured data

- Descriptive – Understand what happened in the past
- Prescriptive – Automate business decisions/processes based on data
- Predictive – Predict future business scenarios

AI Model Options

Options for building and training the model

- Use a pre-trained, off the shelf model
- Fine-tune a commercial or open source model
- Design your own model & train it using your own data

Options for running the model

- Pay someone else to run the model
- Rent hardware to run the model yourself
- Run the model on your own hardware

Trade-Offs When Choosing Your Model

Training

- Training costs time, money, and data.
- Fine-tuning costs less, but still requires expertise and data.
- Off the shelf models often perform well with the right context.

Running

- Privacy is a top concern with hosted services.
- Running your own requires expertise.
- Cost and availability of hardware can also be an issue.

8

How will you evaluate how it's going?

It's critical to have tools to evaluate how your AI efforts are doing and whether the results you're getting are good – or may benefit from adjustments. This applies to both the micro and macro levels:

At the micro level: “Is a particular model/prompt/workflow meeting the needs of our system's users?”

At the macro level: “Are we meeting the overall goals we had for the project?” For example, if the goal was to make some internal operation more efficient, are you actually accomplishing that?

Questions to Ask When Evaluating and Adjusting:

- What is our definition of success?
- What outcomes can be measured to evaluate alternatives?
- How can we collect that data with minimal investment?

Conclusion

Emerging technology like artificial intelligence is exciting and ripe with opportunity, but it's important to approach it as you would any other significant initiative, with a clear understanding of:

- Goals and objectives
- Resource requirements
- Risks
- How you'll measure progress and long-term impact

It's best to begin with small, measured steps and the appropriate level of expertise, whether in-house or an outside partner.

About Revelry

Established in 2012, Revelry is a New Orleans-based digital innovation company that specializes in creating custom software solutions that help its partners across a variety of verticals (from healthcare and logistics to finance and start-up) succeed and scale. To learn more about Revelry's strategic development services, or our team of passionate product managers, design engineers, and back-end developers, visit revelry.co.

LET'S CONNECT



About Our Authors

Heather Bourdoux, Vice President, Strategic Initiatives

Heather joined Revelry in 2022 and brings to the team experience and expertise in strategic planning, process development and optimization, and program management. She is charged with ensuring Revelry is prioritizing efforts between various programs in ways that leverage market trends, team expertise, and time to market; ultimately delivering the highest business value. Additionally, Heather leans in to fill key roles as ideas incubate and find their footing. Previously, Heather was a Senior Technical Program Consultant for Gap Inc, and a Senior Director for Macy's Enterprise Technology Portfolio. She is a certified SCRUM Master and Agile enthusiast.

Jason Pollentier, Director, Engineering

Jason Pollentier joined Revelry in 2017 and offers experience and expertise in full stack-web development, software team leadership, and building SaaS products. As a part of our Engineering leadership team, he is charged with helping shape Revelry's technical direction; advising product teams in their daily work; and nurturing the overall health of Revelry's growing development team. Jason also helps maintain and evolve Revelry's hosting and infrastructure systems and is particularly invested in the ecosystem and community around the Elixir programming language. Prior to joining Revelry, Jason was a co-founder of League Lab; QA and Product Developer at Code Systems Inc (now Turbo.net); and a Math Instructor at Seattle Central Community College. He holds a B.S. in Mathematics from Carleton College.

