State of the Cloud: BVP's five AI trends for 2024

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Christopher Gannatti, CFA
Global Head of Research

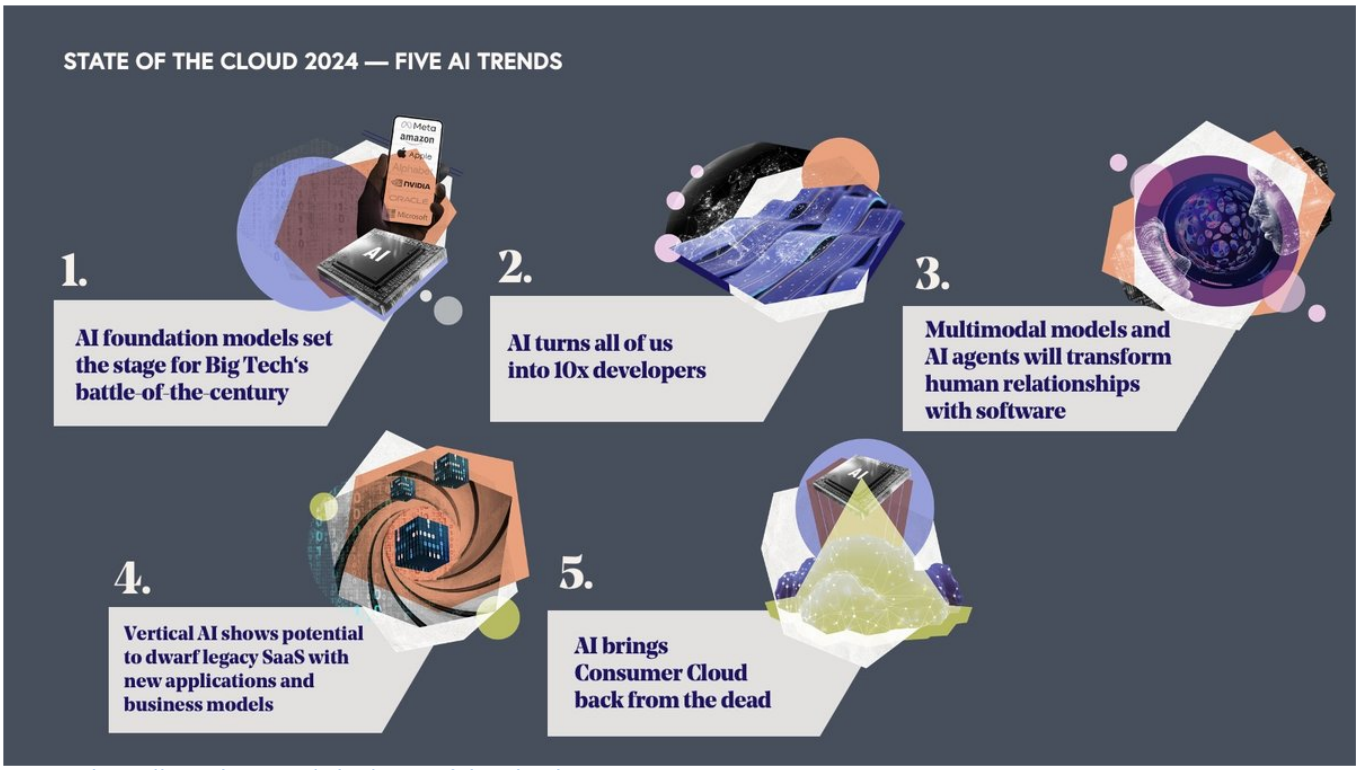
Key Takeaways

- BVP released its annual 'State of the Cloud' report, spotlighting five key AI and cloud-related trends
- These trends are:
    1. Big tech's battle over AI foundation models
    2. AI makes us all 10x developers
    3. The rise of multimodal models and AI agents
    4. Vertical AI dwarfs legacy vertical SaaS
    5. Consumer cloud is back from the dead
- The piece closes with an important thought, credited to Roy Amara, "We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run"

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2. AI makes us all 10x developers
3. The rise of multimodal models and AI agents
4. Vertical AI dwarfs legacy vertical SaaS
5. Consumer cloud is back from the dead

We have often said that artificial intelligence will power other megatrends. It is easier to see the use cases of AI in some industries than in others. AI is the biggest tech theme of recent years, taking the crown from cloud computing, which sat on the throne during the COVID-19 pandemic.

The 2024 State of the Cloud report from Bessemer Venture Partners (BVP), whom we have worked with on our cloud computing strategy since 2020, spotlights five key AI and cloud-related trends. In previous years, AI was a meaningful topic within the report; this year, it is the cornerstone of the report.



Source: https://www.bvp.com/atlas/state-of-the-cloud-2024#page_top

Big tech's battle over AI foundation models

Many might have heard that 'data is the new oil', but in this piece, BVP writes that 'Foundation models are the new oil' that will fuel downstream AI applications and tooling. In 2023, it was also true that foundational model companies captured more than 60% of the total venture capital dollars[1].

- Foundational models captured about $23 billion in funding, whereas applications captured about $11 billion and 'technology & tools' captured $3.9 billion
- The valuation of foundational model was more than $124 billion. Application companies were valued at about $57 billion, while technology & tools companies were valued at $21.30 billion

Notably, many of the largest technology companies—Microsoft, Amazon, Alphabet, Nvidia, Meta, Apple, Salesforce and Oracle—have significant stakes in foundational model companies. We have also seen:

- Base models (e.g., Gemini, Claude, GPT-4) improving rapidly
- The battle between open and closed sources is raging on
- Small models (those with far fewer than hundreds of billions of parameters) are gaining prominence
- Novel architectures are sprouting up beyond the transformer.

BVP sets up a thought experiment, having the reader consider the oil and potato chip markets as a way to think of what the AI model market may one day look like. Even though oil is a commodity, the oil market is dominated by a small number of large companies, and it is difficult for a new company to succeed at

a high level suddenly. The potato chip market is constantly changing—tapping into the right flavour at the right moment could very well lead to viral success. Based on what we know today, the easier prediction is that the largest companies continue their prominence in the AI foundational model market (a smaller number of big players provide the majority of the models).

AI makes us all 10x developers

2023 saw the widespread adoption of code copilots, and it's possible that the role of the software developer could be most affected by AI.

Github's incumbent Copilot, powered by GPT-4 and Codex models, is nearing 14 million installations. Many companies focus on different aspects of writing software code with different attributes, allowing human experts to get faster and better continually.

One of the most interesting forks in the road will be recognising how these systems help the most advanced coders and how other systems will allow almost anyone to have some, at least beginner-level, software coding skills.

The rise of multimodal models and AI agents

When people hear the word 'multimodal', they may think of a complex concept, but really, it just means giving AI the possibility to approach human capabilities across multiple data ingestion pathways—vision, hearing, and speech, to name a few. If AI can ingest information in these ways, it could augment human work that is dependent on these senses.

Voice agents have huge potential because latency is generally going down, and the capabilities of these systems to pick up on such things as 'tone' and 'emotion' or 'expression' are improving daily. It's possible that, with fewer people working, customers may be able to get their questions answered with greater accuracy and speed. Vision, for example, systems that can ingest documents and the information contained therein, have also been massively improving.

In following the market, it feels like there is a push towards 'autonomous AI agents.' The idea of an agent is really a system that can take on a multi-step process for a user. Taking a trip on an airline is frequently cited as an example, in that one must recognise many underlying steps and different technology needs throughout the journey. We don't just hop onto the plane and depart at our final destination. A system that can monitor the progress of a journey and seamlessly arrange different modes of transportation from your home to your hotel would be quite impressive.

Vertical AI dwarfs legacy vertical SaaS

Today, the top 20 US public companies in the vertical SaaS space represent roughly $300 billion in market capitalisation, with many of these companies fairly new to the public market. Vertical AI applications target the high-cost, repetitive language-based tasks that dominate numerous verticals and large sectors of the economy.

The US Bureau of Labor Statistics cites the ‘Business and Professional Services’ industry at 13% of the US gross domestic product (GDP), making this sector alone, which is known to be dominated by repetitive language tasks, about 10 times the size of the software industry.

Copilots, Autopilots and AI-enabled services are three new vertical AI economy business models. Notably, copilots work alongside a user, autopilots or agents can complete a task autonomously, and AI-enabled services represent various things that we might have thought of as ‘outsourcing’ in the past. Instead of sending the task to a group of people, the task is sent out to software.

Consumer cloud is back from the dead

Consumer cloud has had a slow decade. BVP puts out its ‘Cloud 100’ list each year, and only 4% of the cumulative lists going back nine years represented companies with a consumer offering. One can argue that Dropbox was the last exit of a pure consumer cloud company, which was a 2018 initial public offering.

ChatGPT, released in November 2022, has had remarkable consumer uptake and is emblematic of AI’s capacity to, at least so far, take on the heavy hitters in the ‘attention economy.’ It is still early, but there are signals that consumers are interested in AI applications and in playing with them to see how they might improve their daily lives.

Conclusion: Is AI a bubble?

We are asked this question often, and BVP notes in their conclusion the phrase ‘reality vs. hype.’ However, BVP also put in one of our favourite quotes from Roy Amara, an American scientist and futurist:

“We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run.”

As we sit in 2024, we find ourselves directly in the mix of the short run. Many of us might think that AI is getting a lot of headlines, but it doesn’t seem to impact ME yet. AI is not yet responding to all of MY emails or helping with MY calendar, for example. However, if we are honest, take the smartphone billions of people hold today. Steve Jobs was presenting on the stage in 2007[2]. For a bit of time, we were debating whether we wanted to type on a glass screen or if we wanted a keyboard. Now, smartphones are virtual keys that unlock an array of services we can access nearly anywhere in the world.

Similar to how we currently don’t think, ' Oh wow, that is a smartphone, ' or ‘that person is using a smartphone,’ there will come a time when AI leaves the headlines and becomes a part of how we use technology. Our gateway into AI’s beneficial impacts will likely be software.

Unless otherwise noted, data is sourced from: The BVP State of the Cloud 2024 Report, publicly available on BVP’s Cloud Atlas Website[3].

[1] Source: Morgan Stanley, within BVP’s 2024 State of the Cloud Report.

[2] Source: Steve Jobs presented the iPhone on January 9, 2007. https://en.wikipedia.org/wiki/History_of_the_iPhone#:~:text=On%20Janu-

ary%209%2C%202007%2C%20Steve,applications%20using%20the%20Safari%20engine.

[3] Source: https://www.bvp.com/atlas/state-of-the-cloud-2024#page_top

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