AI Industry Analytics

DEEP KNOWLEDGE GROUP

AI Industry Global Economy Size Assessment

Summary of the Methodology

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In order to conduct a comprehensive analysis of the AI industry, AiiA conducts a comprehensive and extensive evaluation of how the AI industry influences both individual national economies and the global economic landscape as a whole.

Preliminary Analytical Framework Formation and Applied Research Methods. To obtain a large amount of relevant data, AiiA has developed a preliminary AI-driven framework that includes various proprietary algorithms for collecting, processing, and analyzing the data. These algorithms are based on such analytical and research methods as Descriptive Analysis, Mixed Data Research, Data Triangulation, Comparative Analysis, Qualitative Data Collection, and Data Filtering. The use of such methods in combination provides a large amount of qualitative data that is cross-validated and can be used for further analysis.

Preliminary Database Compilation. After collecting and verifying the data, AiiA created a preliminary database which will be constantly updated in the real time due to ever-increasing industry complexity.

Data Sources. The data utilized in this study originates from an extensive array of reputable public and private sources, ensuring the acquisition of comprehensive and accurate information. A multitude of reliable resources were meticulously selected to provide a robust foundation for this research. For the purposes of the analytical case study, various media overviews (articles and press releases), industry-specialized databases, publicly available sources (such as websites), industry reports and reviews, government reports and other types of data sources were all used.

Data Accuracy. Data Accuracy represents a crucial and indispensable phase in the data collection process, signifying its culmination. Employing the aforementioned methods and the cross-validation technique, the accuracy of the acquired data is assessed. This approach guarantees the validation of each parameter obtained. However, **it is worth noting that due to the scale of the work done, we did not try to achieve 100% data accuracy in our research.** In the initial planning, we set an 80% level of data precision, and we estimate that **the proprietary methods we used have achieved 85% data accuracy. In the next iterations of this analytical case study, the data quality will be improved.**

AI Economy Size Assessment. We applied a three-tier approach to conduct a preliminary assessment of AI Economy Size. For this purpose, we separately calculated the capitalization of publicly traded AI companies, and the preliminary list of these companies is available on website. Moreover, we also estimated the size of the market created by private equity companies. In order to obtain the necessary information about these companies, we used our proprietary methods - Named Entity Recognition and AI-driven companies' cross-analysis. AiiA's partner company Aging Analytics Agency used these methods earlier to profile the Longevity Industry. Some information, such as a general overview of the companies of their maturity stage, is disclosed in this analytical case study. However, it is worth noting that in the next iterations of the report, the data accuracy of the applied algorithms will increase, affecting the final valuation of private equity AI companies and,

consequently, the AI Industry Size Assessment. The third element of our analysis was the estimation of government-funded projects. It is worth emphasizing here that we compared a list of different public projects, including those that do not have a direct financial impact but have a rather significant social value. We will continue to improve our assessment, including by utilizing the expertise of our colleagues from the Aging Analytics Agency (as part of the Longevity Governance project) and Deep Knowledge Analytics (as part of the Global GovTech Industry project).

Industry-specific Analysis. In this analytical report, we provide a detailed analysis of 3 major industries (according to their degree of AI technology implementation and substantial volume), including BioTech & HealthTech (the industry also has a significant positive impact on people's lives), Financial Industry and Infrastructure for AI (the skeleton for the dynamic exponential growth of the AI Industry). In the subsequent iterations of the report, we will increase the number of industries analyzed in accordance with the framework.

Regional Analysis. This analytical case study provides information on the top regions with high economic and technological development. We assume that the actual number of AI companies in countries such as China exceeds the number of Chinese companies in our database. However, at the moment, we need an algorithm that would display all the information we need. This is a topic for our future research. In addition, in the next iterations of this report, we will analyze regions in more detail.

In producing this analytical case study, our team faced the following challenges:

1. **Create a logical framework to define the AI industry.** We managed to create a reasonably comprehensive framework, discussed below in our analytical report. However, the AI industry is developing rapidly every day, so we note that this analytical framework is only preliminary. We will continue to work on its improvement in further iterations of the analytical report.

2. **Assessment of the AI Economy size.** As we mentioned earlier, many different objective factors related to the industry size estimation prevent us from claiming that the figures presented in the report are final. We estimate our results with 85% data accuracy.

3. **AI Industry complexity.** In the subsequent iterations of the report, we plan to consider a more comprehensive range of industries (beyond the three presented in this analytical case study) that form the AI Industry. In addition, we plan to profile the industry more deeply by region. For example, we will analyze Latin America, Southwest Asia, and other countries separately. In some cases, it makes sense to study countries at the level of their administrative units. In particular, we plan to analyze the US AI industry in states like New York, Massachusetts, and California.

4. **Broad the regional distribution reviewed in the analytical case study.** We are also interested in exploring such a region as Africa. We are intentionally building a bridge between Philanthropy and AI. That is why we will analyze AI projects regarding their relation to Techno-Philanthropy.

5. **AI Economy Size Forecast.** We used proprietary data science methods developed by the 5th Industrial Institute (as part of the AI-driven Long-Term Forecasting System) when making forecasts. We believe that humanity is currently at stage 4.3 in the transition

between the 4th Industrial Revolution (4.0 phase started in 2020) and the 5th Industrial Revolution (5.0 phase started in 2030). The development of the DeepTech Industry empowered by the AI Revolution will provide the necessary technological conditions to complete this transition.

Preliminary Analytical Framework Formation

The exponential growth and advancement of the AI industry have ushered in a revolutionary era, fundamentally transforming how we gather, analyze, and leverage data. As we navigate through this transformative phase, it becomes imperative to delve into the avenues that guide us towards obtaining high-quality data, which forms the bedrock of AI-driven systems and applications.

AI stands as a remarkable example of a "metatechnology," a technology that not only creates and enhances other technologies but also has the potential for self-improvement. While recursive self-improvement through AI-driven coding is often considered the ultimate goal, the current realistic avenue for AI's self-improvement lies in AI-driven industry analysis. However, the analysis of the rapidly evolving AI industry presents a challenge, given its high level of intersectionality and its impact across various sectors.

To address this challenge, AiiA introduces **AI Industry Framework**, a vital tool designed for pioneers in AI-powered industries. Leveraging AI algorithms and machine learning techniques, we can efficiently analyze vast amounts of structured and unstructured data, unveiling hidden patterns, trends, and correlations that would otherwise remain unnoticed. This deep analysis empowers organizations to develop a comprehensive understanding of their respective industries, enabling more informed and strategic decision-making.

Our AI-powered analytics further contribute to operational efficiency by optimizing workflows, identifying bottlenecks, and suggesting improvements. Moreover, our in-depth analysis uncovers hidden risks and opportunities, allowing companies to proactively mitigate risks and capitalize on emerging trends. By harnessing the power of AI for profound analytics, we evaluate and rate companies across various AI-related industries based on their overall development and industry evolution. Our data-driven insights enhance companies' competitive edge, facilitate innovation, and foster growth in today's dynamic business landscape.

Applied Research and Analytics Methods

In order to conduct a comprehensive analysis of the AI industry, AiiA has adopted a multicomplex industry approach. This approach goes beyond examining the role of AI solely within specific sectors and industries, but encompasses its manifestations across all domains. AiiA's unique methodology involves scrutinizing the AI industry's impact within various sectors, including HealthTech and BioTech, Finance, Infrastructure for AI Industry and others. By employing this holistic approach, AiiA facilitates a comprehensive and extensive evaluation of how the AI industry influences both individual national economies and the global economic landscape as a whole.

To obtain a large amount of relevant data, AiiA has developed its own AI-driven framework

that includes various sophisticated methods for collecting, processing, and analyzing the data. AiiA used proprietary algorithms for collecting, processing, and analyzing text data. These methods are based on such analytical and research methods as Descriptive Analysis, Mixed Data Research, Data Triangulation, Comparative Analysis, Qualitative Data Collection, Data Filtering. The use of such methods in combination provides a large amount of qualitative data that is cross-validated and can be used for further analysis. These methods were used to analyze the texts obtained. They were used to perform the process of identifying entities ***(Named Entity Recognition – proprietary algorithm)***. Subsequently, the above methods were used to cross-validate the obtained data.

Preliminary Database Compilation

After collecting and verifying the data, AiiA created a preliminary database[1] which will be constantly updated in the real time due to the industry complexity. For the purposes of the current AI Economy size assessment was used the information related to the database composition with the following parameters:

Category	Current number of entities
Companies	**50,000**
Public	750
Private	49,250
Investors	**20,000**
Private Investors	10,400
Investment Funds	7,500
Institutional Investors	2,100
Hubs & Organizations	**2,500**
Accelerators	1011
Government Offices	328
R&D Hubs	452
Industrial Hubs	138
Incubators	453
University Hub	118

Data Sources

The data utilized in this study originates from an extensive array of reputable public and private sources, ensuring the acquisition of comprehensive and accurate information. A multitude of reliable resources were meticulously selected to provide a robust foundation for this research. The table presented below succinctly outlines the plethora of sources incorporated in this investigation, underscoring the comprehensive nature of the data collection process:

Sources	
Media Overview (Article and Press Release)	**Industry-specialized Databases**
Public Available Sources (Websites)	**Industry Reports and Reviews**
Bloomberg	**Refinitiv**
World Bank Open Data	**UNdata**
Government Reports	**TheGlobalEconomy.com**

Data Accuracy

Data Accuracy represents a crucial and indispensable phase in the data collection process, signifying its culmination. Employing the aforementioned methods and the cross-validation technique, the accuracy of the acquired data is assessed. This approach guarantees the validation of each parameter obtained. Consequently, the data and its corresponding parameters obtained from multiple sources are retained within the final database, constituting valuable information for subsequent analyses. Conversely, data that fails to satisfy all verification checks undergo further refinement through alternative sources and algorithms.

SWOT Analysis Parameters

The AI Industry Analytics employs a comprehensive methodology, encompassing a range of factors such as business requirements, industry trends, and technological advancements, in order to formulate a customized solution that can yield maximal outcomes. This systematic approach entails the thorough examination of multiple dimensions of information, facilitating an in-depth comprehension of the problem at hand and its fundamental determinants.

Based on the **metrics** collected the following **preliminary analytical vectors** are formed following the proprietary methodology:

- Scientific Background
- Strategic Collaborations

- R&D Collaborations
- Product Development
- Intellectual Property
- Marketing & Media Presence
- Financial Position
- M&A Strategy
- Product Distribution
- Operating Environment
- Reviews & Quality Assessment

We wish to emphasize that this analytical report on the Global AI Economy Size Assessment serves as the inaugural iteration, laying the fundamental groundwork for future, more comprehensive studies. Built within the realms of the rapidly advancing AI industry, this opening investigation sets the stage by fleshing out a preliminary direction of understanding the shape, scale, and potential of the global AI economy.

Inherent in the dynamic nature of the AI industry and the swiftly evolving digital landscape, the methodology employed in this assessment is integral and inevitably subject to refinements and enhancements. While we have done our utmost to ensure the reliability and accuracy of the data and analyses presented in this study, we acknowledge that certain limitations intrinsic to this inaugural iteration prevent us from claiming absolute precision. For this reason, we have aimed for an 80% level of data precision and have satisfactorily managed to accomplish 85% data accuracy using our proprietary methods. It's important to state that our pursuit of data precision doesn't cease with this iteration. On the contrary, it ignites a continuous process of methodological revision and enhancement.

Looking forward to October, we anticipate publishing the next Global AI Economy Size Assessment Report. This upcoming iteration will manifest significant extensions and upgrades in terms of both depth and breadth of analysis. Improvements will be grounded in an evolved and enhanced methodology informed by the learnings and insights gleaned from the current analysis, as well as the subsequent advancements in AI technology and industry practices.

As we delve deeper into the AI economy on a global scale, we will refine our preliminary analytical framework, refining definitions and outlining more expansive sectoral boundaries. This inevitably leads to a broader and better understanding of how the AI industry permeates various sectors such as HealthTech, BioTech, Finance, Infrastructure for the AI industry, and more. This comprehensive and cross-sectoral analysis lends itself to an enriched industry-specific analysis in our upcoming report.

We also plan to diversify and enhance our regional analysis; we recognize that the current report could benefit from exploring both established and emerging regions in more detail. Recognizing the sparse representation of regions such as Africa and Latin America, we are

committed to expanding the scope of our regional analysis to include these underrepresented regions. Additionally, we acknowledge the need for an algorithm to better analyze more technologically advanced countries, such as China, and intend to address this issue in the forthcoming update.

We also aim to increase our focus on government-funded projects, and public initiatives that, while not directly impacting AI industry's monetization, influence significant social value and drive legislative and regulatory landscapes for AI technologies.

As AI technology continues to play an increasingly important role in our lives, we also look forward to examining the relationship of AI projects in relation to Techno-Philanthropy, acknowledging the prominent social potential within the AI sector whilst satisfying investor appetite.

Furthermore, our next report will feature an innovative AI Economy Size Forecast, utilizing proprietary data science methods from the 5th Industrial Institute. Drawing upon the power and potential of AI, we will provide robust long-term forecasting that takes into account burgeoning technological advancements and socio-economic factors affecting the AI industry on a global scale.

We would like to affirm our unfaltering commitment to delivering the highest level of analysis and meticulously validated data in our continuing exploration of the global AI economy. This inaugural report is merely the beginning of an exciting adventure into the economic marvel that is the AI industry, and we are excited to continually improve and expand upon this work in the months and years to come.

We are indeed at the helm of an extraordinary era of technological evolution, and we look forward to unravelling the true might and potential of the global AI economy together in our forthcoming report this October, when we shed more light on the complexities and mysteries of the AI industry while continuously pushing the boundaries of economic analysis into unprecedented territories.

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Note: This is only a summary of the methodology. The full methodology can be provided to the relevant counterparties at their request.

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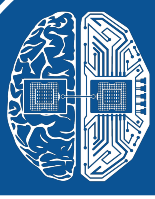

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