1.1 Publications

Overview

The figures below present the global count of English-language AI publications from 2010 to 2022, categorized by type of affiliation and cross-sector collaborations. Additionally, this section details publication data for AI journal articles and conference papers.

Total Number of AI Publications[1]

Figure 1.1.1 displays the global count of AI publications. Between 2010 and 2022, the total number of AI publications nearly tripled, rising from approximately 88,000 in 2010 to more than 240,000 in 2022. The increase over the last year was a modest 1.1%.

Number of AI publications in the world, 2010–22

Source: Center for Security and Emerging Technology, 2023 | Chart: 2024 AI Index report

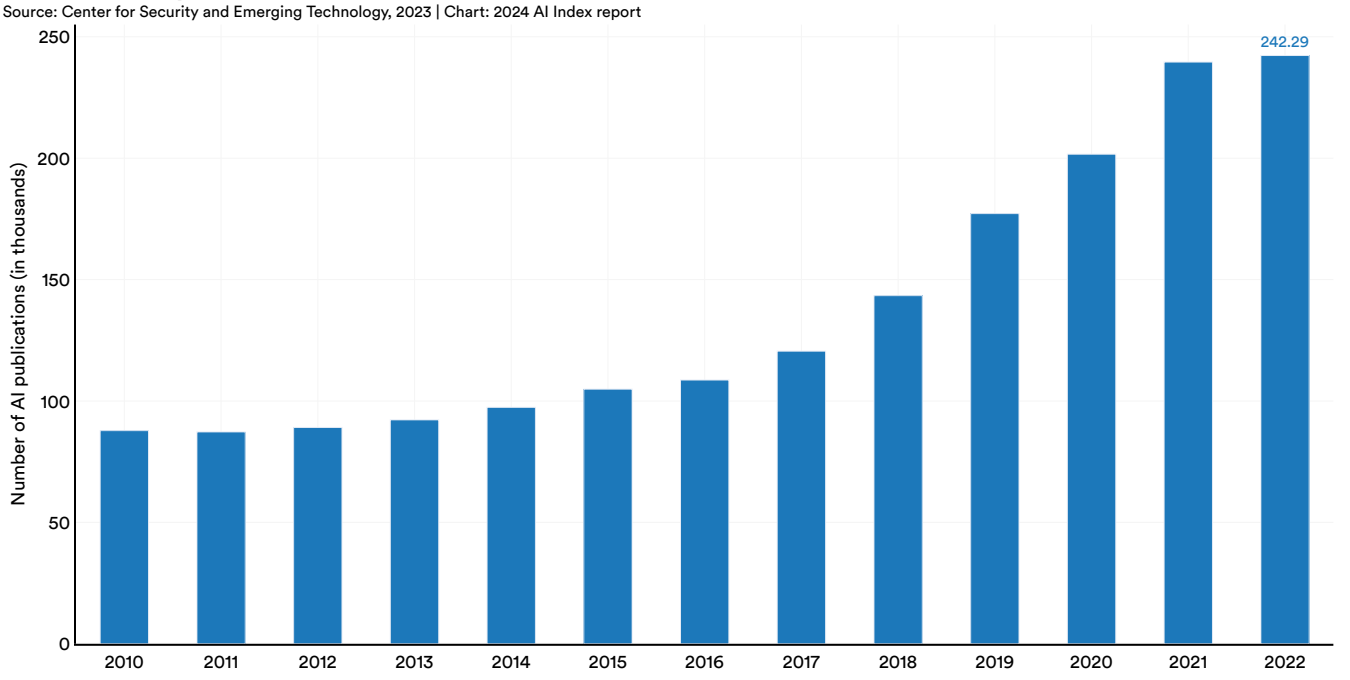

Figure 1.1.1

1 The data on publications presented this year is sourced from CSET. Both the methodology and data sources used by CSET to classify AI publications have changed since their data was last featured in the AI Index (2023). As a result, the numbers reported in this year's section differ slightly from those reported in last year's edition. Moreover, the AI-related publication data is fully available only up to 2022 due to a significant lag in updating publication data. Readers are advised to approach publication figures with appropriate caution.

By Type of Publication

Figure 1.1.2 illustrates the distribution of AI publication types globally over time. In 2022, there were roughly 230,000 AI journal articles compared to roughly 42,000 conference submissions. Since 2015, AI journal and conference publications have increased at comparable rates. In 2022, there were 2.6 times as many conference publications and 2.4 times as many journal publications as there were in 2015.

Number of AI publications by type, 2010–22

Source: Center for Security and Emerging Technology, 2023 | Chart: 2024 AI Index report

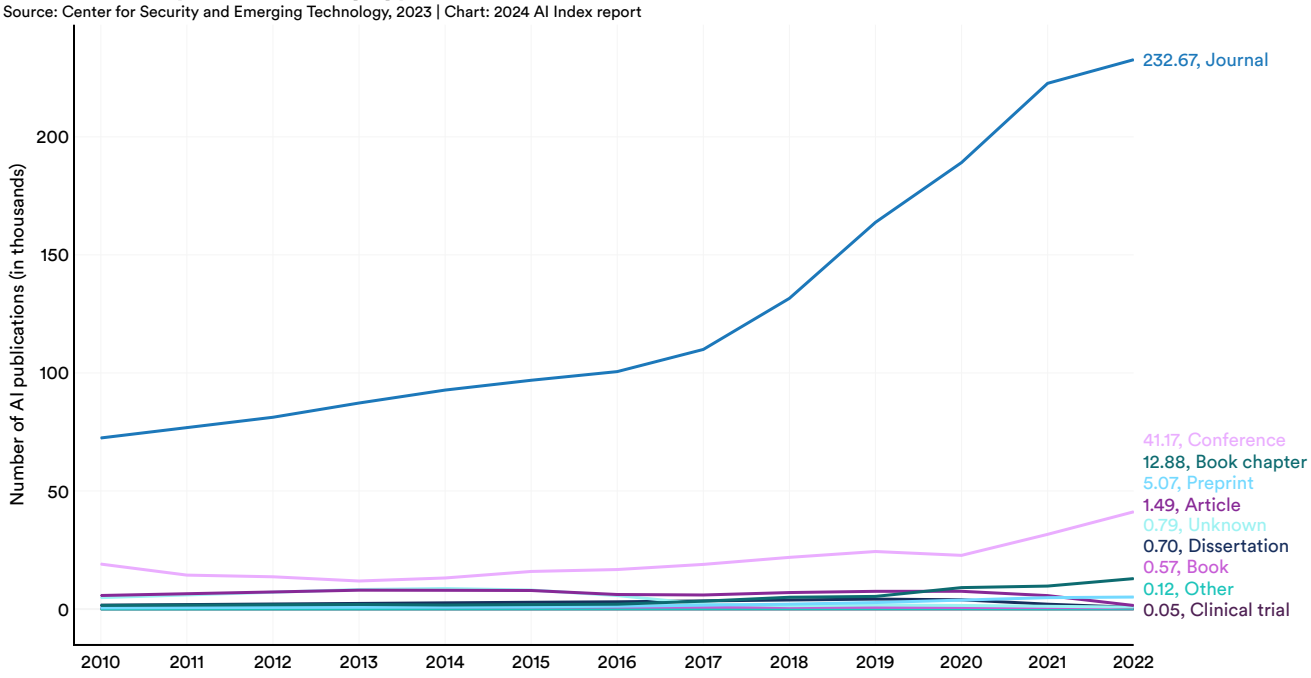

Figure 1.1.2[2]

2 It is possible for an AI publication to be mapped to more than one publication type, so the totals in Figure 1.1.2 do not completely align with those in Figure 1.1.1.

By Field of Study

Figure 1.1.3 examines the total number of AI publications by field of study since 2010. Machine learning publications have seen the most rapid growth over the past decade, increasing nearly sevenfold since 2015. Following machine learning, the most published AI fields in 2022 were computer vision (21,309 publications), pattern recognition (19,841), and process management (12,052).

Number of AI publications by field of study (excluding Other AI), 2010–22

Source: Center for Security and Emerging Technology, 2023 | Chart: 2024 AI Index report

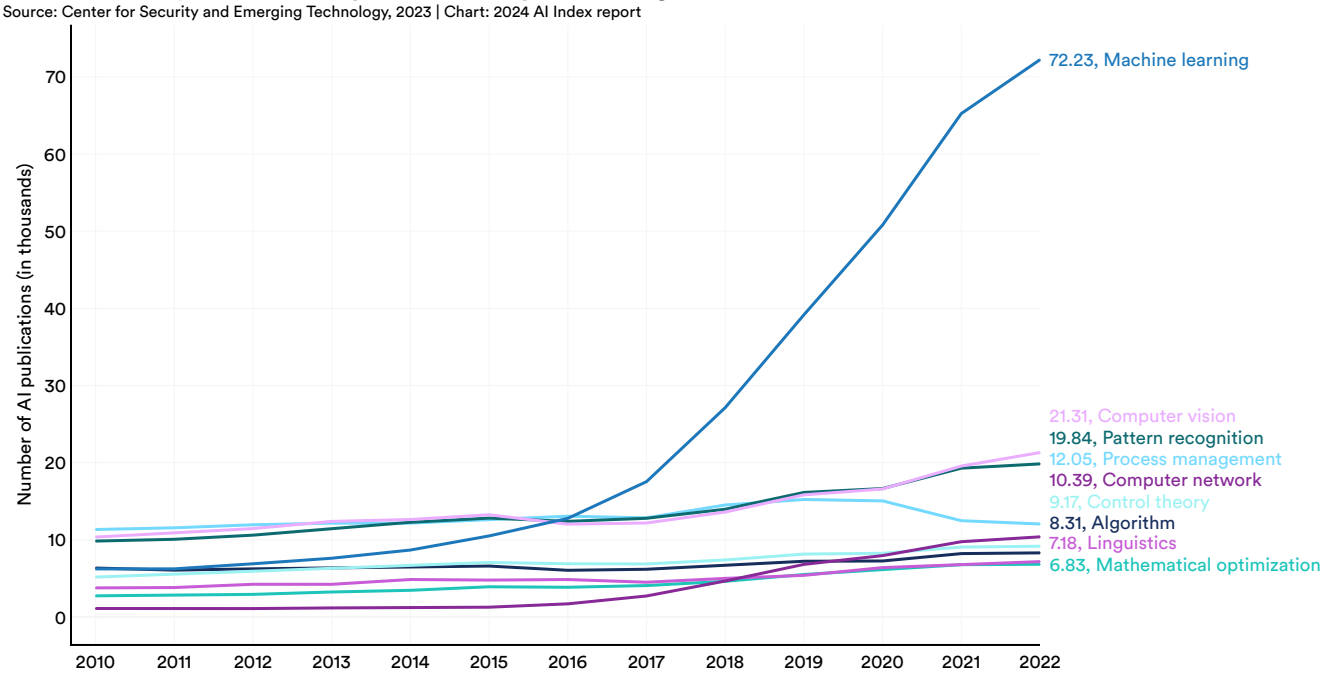

Figure 1.1.3

By Sector

This section presents the distribution of AI publications by sector—education, government, industry, nonprofit, and other—globally and then specifically within the United States, China, and the European Union plus the United Kingdom. In 2022, the academic sector contributed the majority of AI publications (81.1%), maintaining its position as the leading global source of AI research over the past decade across all regions (Figure 1.1.4 and Figure 1.1.5). Industry participation is most significant in the United States, followed by the European Union plus the United Kingdom, and China (Figure 1.1.5).

AI publications (% of total) by sector, 2010–22
Source: Center for Security and Emerging Technology, 2023 | Chart: 2024 AI Index report

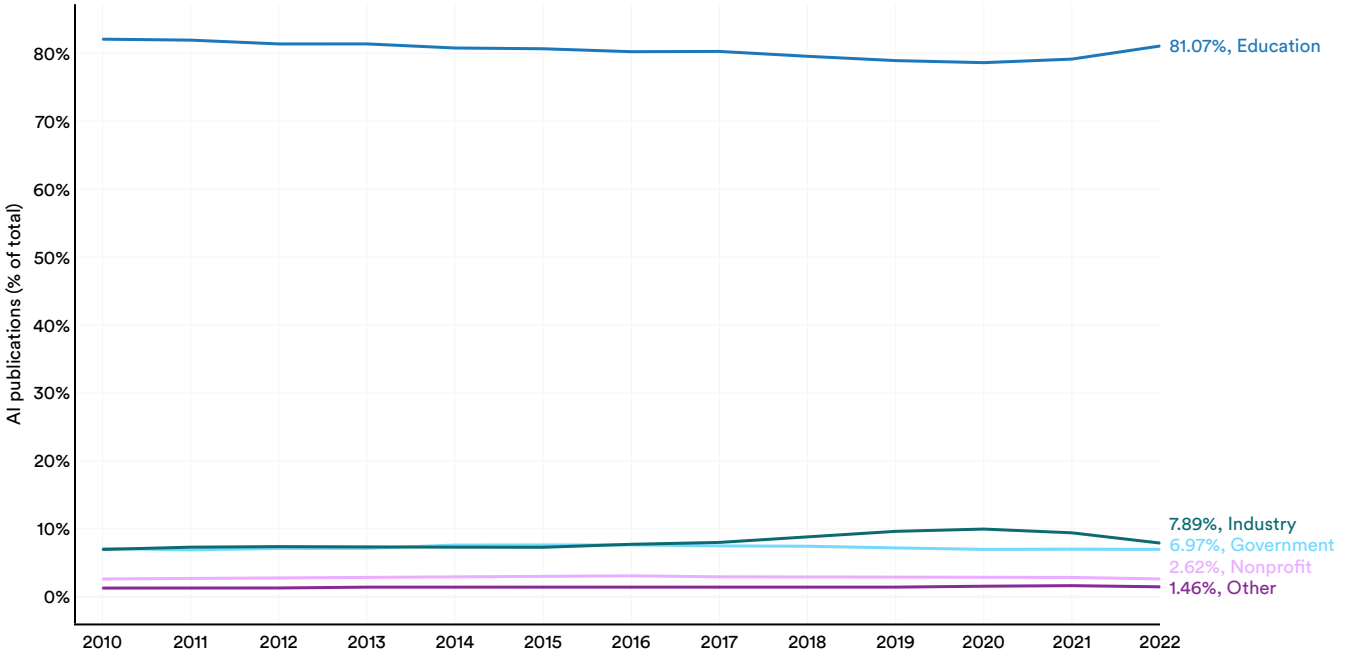

Figure 1.1.4