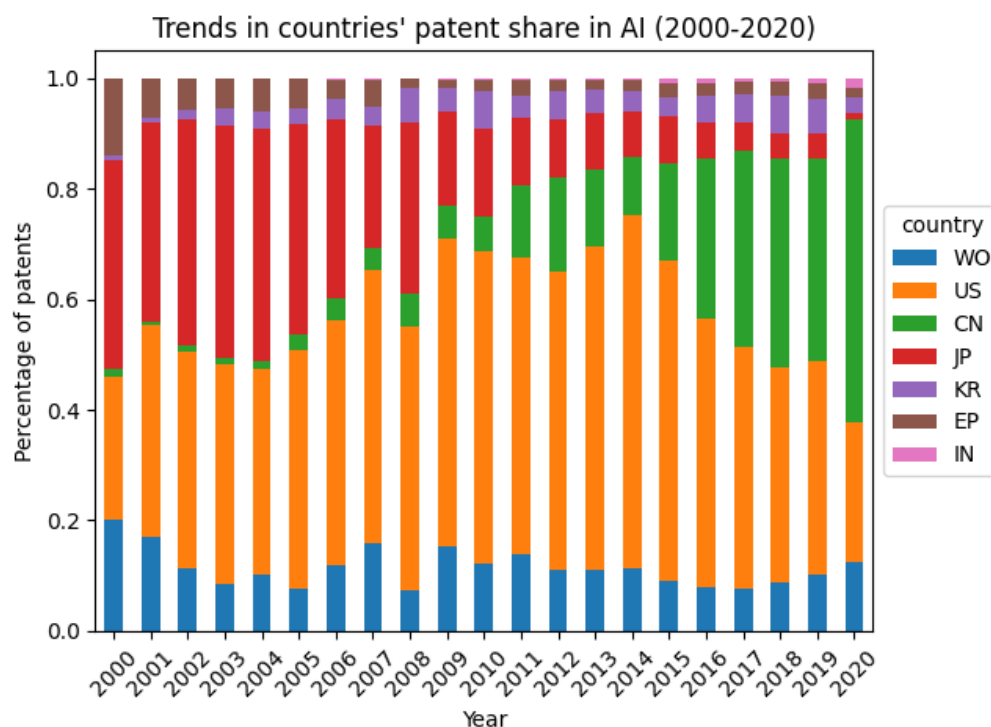


# INFSCI 2415 Final Report

## The number of patents in artificial intelligence from 2000 to 2020

Figure 1 Stacked Bar:



**Data resource:** Derwent Innovations Index.

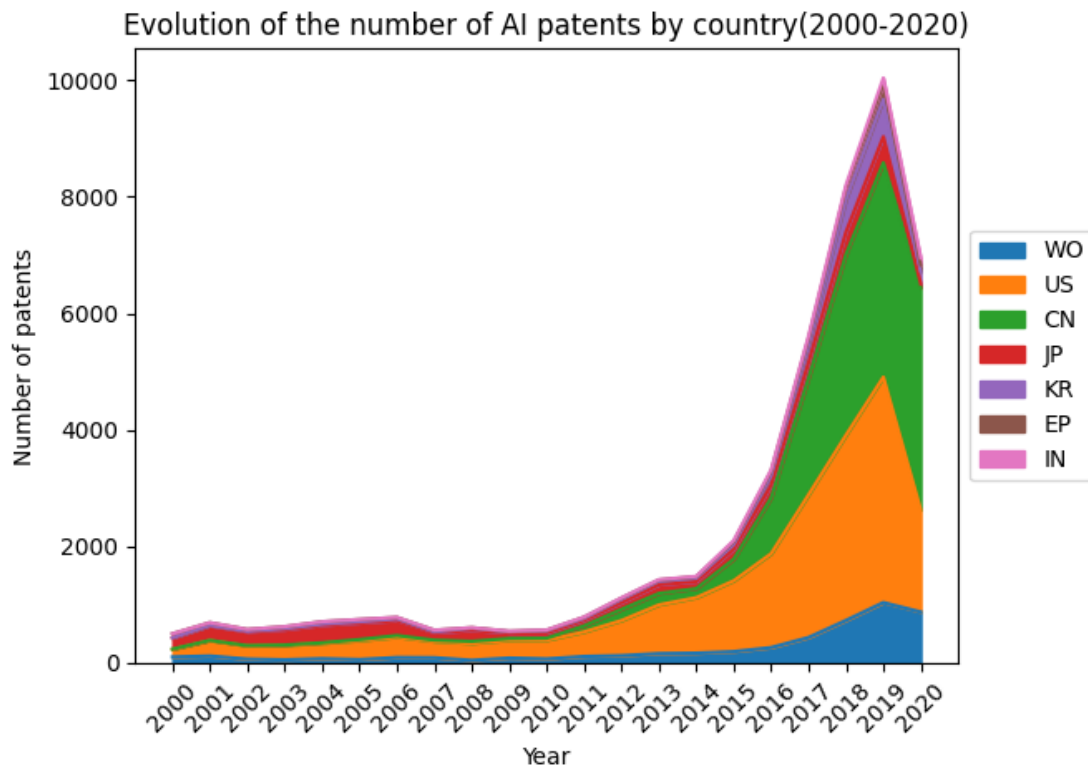
### legend explained:

- ♦ blue bar represents international patents.
- ♦ Orange bar represents United States.
- ♦ Green bar represents China.
- ♦ Red bar represents Japan.
- ♦ Purple bar represents South Korea.
- ♦ Brown bar represents Europe.
- ♦ Pink bar represents India.

### Findings text introducing highlights of the produced figure in bulletin points:

- ♦ This histogram provides an intuitive representation of the number of patents published by the countries in the field of artificial intelligence as a percentage of the total number of patents in the AI field for that year.
- ♦ The total number of AI patents has significantly increased over time.
- ♦ The red bars represent Japan, which had an advantage in the early years.
- ♦ The orange bars represent the United States, which dominated in the mid-term.
- ♦ In recent years, the green bars represent China, which has taken the lead.
- ♦ Other colors represent countries with relatively insignificant changes in their percentage share over the 20-year period.

Figure 2 Area:



**Data resource:** Derwent Innovations Index.

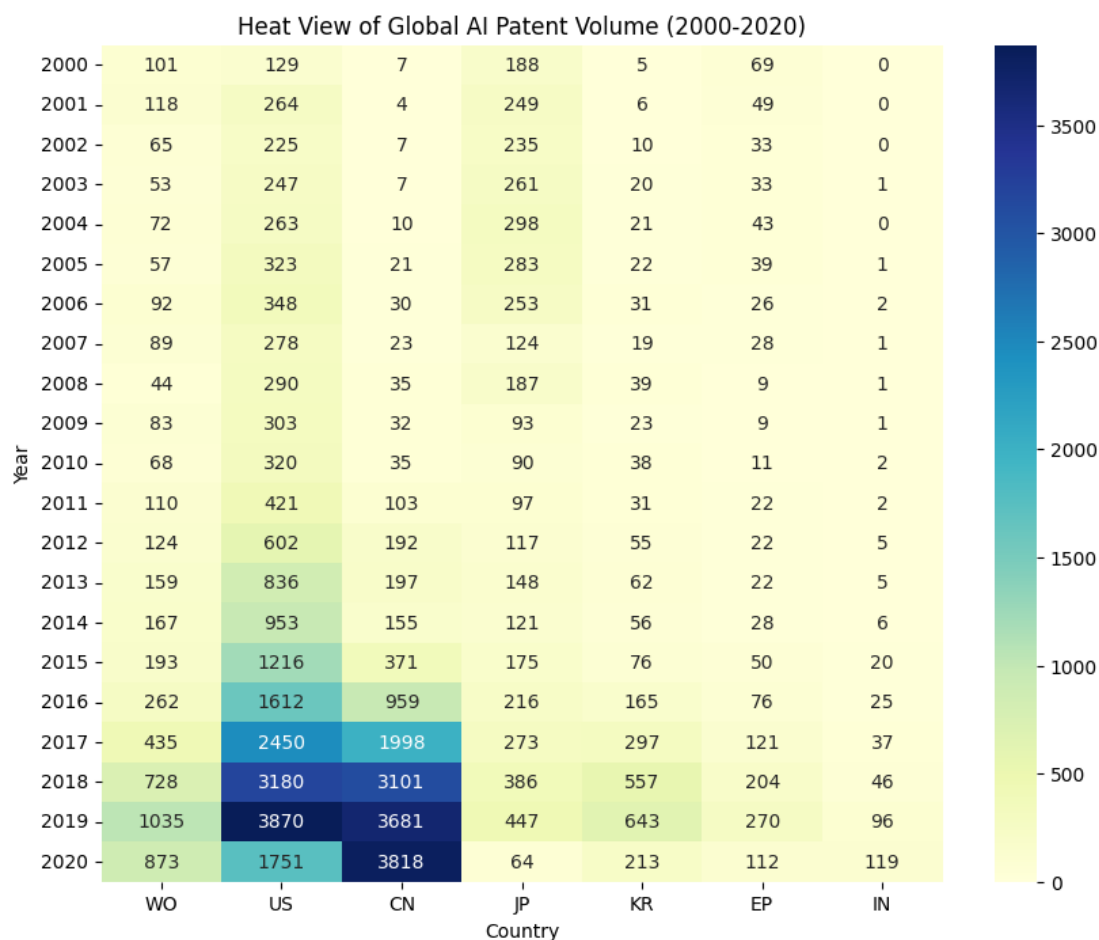
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**Findings text introducing highlights of the produced figure in bulletin points:**

- ♦ This area chart vividly illustrates the annual growth in the number of AI patents published by different countries from 2000 to 2020.
- ♦ There is a noticeable overall increase in the volume of AI patents over the two decades, indicating a rising interest and investment in this field.
- ♦ In the earlier years, Japan (shown in a distinct color) demonstrates a significant presence in the AI patent landscape.
- ♦ The United States, depicted by another distinguishable color, shows a dominant surge in AI patents, particularly in the middle years of this period.
- ♦ In recent years, the layer representing China becomes more prominent, highlighting its growing influence and leadership in AI innovation.
- ♦ Other countries, shown in various colors, display a steady but less dramatic contribution to the field of AI patents over this period.

Figure 3 Heatmap:



**Data resource:** Derwent Innovations Index.

**legend explained:**

- ◆ This heatmap provides a clear, color-coded representation of AI patent publications by country for each year from 2000 to 2020.

**Findings text introducing highlights of the produced figure in bulletin points:**

- ◆ This heatmap provides a clear, color-coded representation of AI patent publications by country for each year from 2000 to 2020.
- ◆ Darker shades in the heatmap indicate a higher number of patents, revealing trends and shifts in AI innovation over time.
- ◆ The early years are marked by darker tones for Japan, suggesting its initial leadership in AI patent publications.
- ◆ Midway through the timeline, the United States exhibits a concentration of darker shades, signifying a period of increased patent activity.
- ◆ In the latter years, China shows a noticeable darkening trend, indicating a significant rise in its share of AI patents.
- ◆ The variation in color intensity across different countries and years effectively highlights the dynamic nature of global AI patent trends.