

SIDEBAR

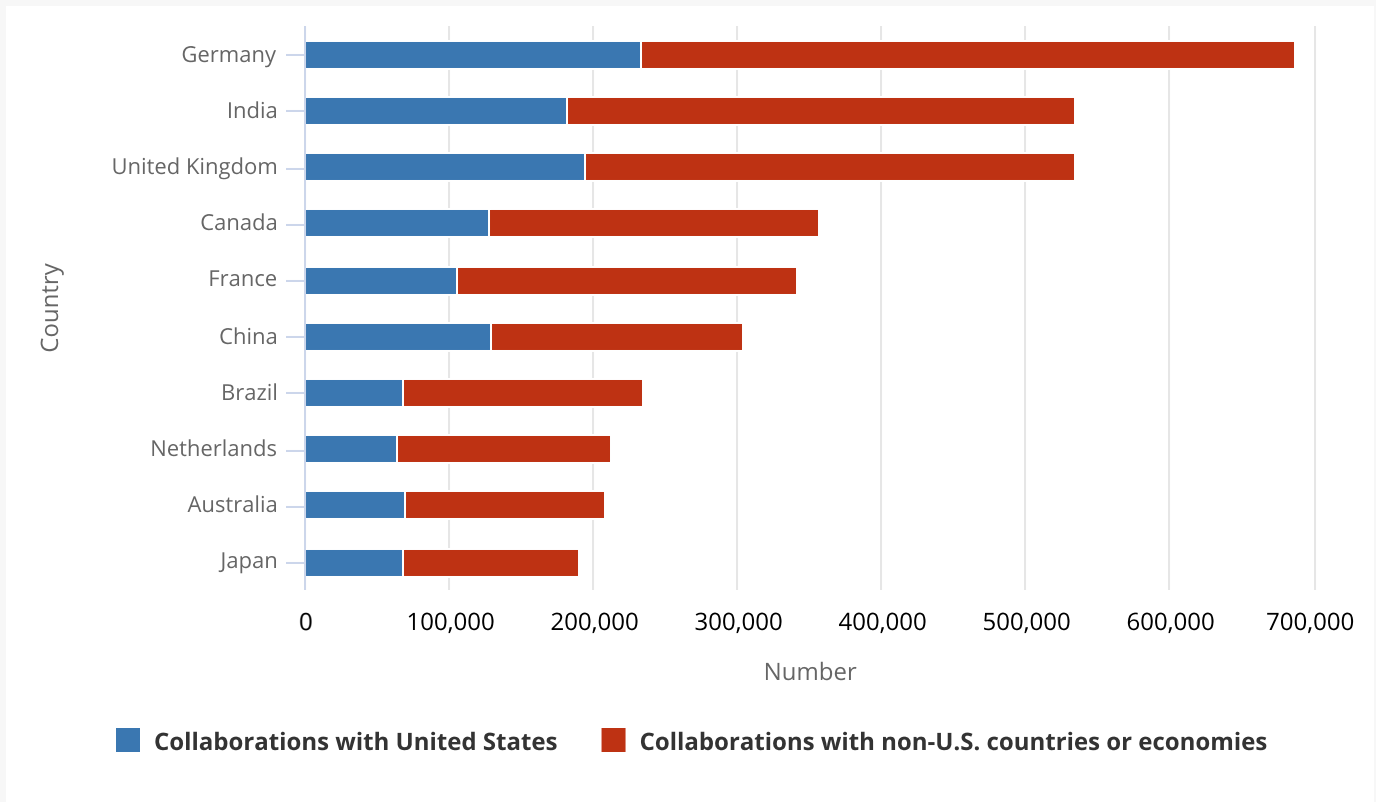
Sidebar: U.S.-International Collaborations in Open-Source Software

Developers throughout the world collaborate widely through the creation of open-source software (OSS). GitHub, the world's largest remote source code–hosting platform, provides tools to collect user attribute and activity data that can be analyzed to assess OSS collaborations across countries. Collaboration is defined in terms of pairs of individuals that contribute code to a common repository. Similar to the way in which research publication records show patterns of collaboration in the *Indicators* report “[2022] Publications Output: U.S. Trends and International Comparisons,” OSS collaboration networks show international relationships in knowledge creation and transfer.

The dataset used for analysis contains each GitHub repository with an open-source license as well as information on the location of each repository's contributors for 2018. For OSS developers in the United States with projects on GitHub, cooperation was most frequent with collaborators from Germany, followed by the United Kingdom, and India (Figure INV-A). This collaboration pattern differs from that of peer-reviewed publications in which authors from the United States are most often collaborating with Chinese coauthors (see *Indicators* report “[2022] Publications Output: U.S. Trends and International Comparisons”).

Figure INV-A

International collaborations with the United States and with non-U.S. countries in development of open-source software, by 10 largest contributing countries: 2018



Note(s):

Collaborations are counted using whole counts by which each collaboration partner receives one count for each open-source software collaboration identified in GitHub.

Source(s):

Robbins C, Korkmaz G, Guci L, Santiago Calderón J, Kramer B. 2021. *A First Look at Open-Source Software Investment in the United States and in Other Countries, 2009–2019*.