TECHNOLOGY FEATURE Developer Ecosystem / Software Policy Report / Research Communication

The Open-Source Opportunity Pakistan Is Not Taking Seriously Enough

Pakistani developers have quietly climbed into the top 20 open-source communities on GitHub, ahead of Poland and just behind Australia — yet almost none of Pakistan's public sector procurement, university curricula, or industry policy treats open-source contribution as a strategic asset worth cultivating on purpose.

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Introduction

Buried inside GitHub's 2025 Octoverse report is a ranking almost nobody in Pakistani tech media wrote about: among the world's top 20 developer communities by contributor count, Pakistan sits at number 20, having overtaken Poland, and trails only the Philippines and Australia in the next two spots. This is not a one-off. It follows years of steady growth — Pakistan was already ranked among the fastest-growing open-source contributor bases globally back in 2020, with year-on-year contributor growth above 50 percent. A country that struggles to crack most global technology rankings has, almost by accident, built one of the more active developer communities on the planet's largest code-collaboration platform.

Yet ask most software houses, government IT departments, or university career offices in Pakistan what the country's open-source standing means for national strategy, and the honest answer is: nothing, officially. There is no equivalent of India's long-standing preference for open standards in government procurement, no national open-source program office coordinating public contributions, and no systematic effort to convert individual GitHub reputations — which increasingly substitute for a CV in global hiring — into a recognised national talent-signalling asset the way, say, competitive programming rankings already are.

That gap matters more than it might first appear. Open-source contribution is one of the few globally legible, entirely merit-based signals a developer in Lahore or Peshawar can send to an employer or client anywhere in the world, with no degree, accent, or visa required to prove it. It is also one of the cheapest forms of soft power and technical capacity-building available to a state that cannot afford to build every layer of its digital infrastructure from scratch. Pakistan is already doing the hard part — showing up and contributing at scale. What is missing is any deliberate strategy for turning that into leverage.

> ***"Pakistan cracked the world's top 20 open-source developer communities without a single policy document mentioning it. Imagine what a deliberate strategy could do."***

How Pakistan Quietly Climbed the Rankings

Much of this growth is organic rather than engineered. Freelancers building portfolio projects to win Upwork and Fiverr bids, computer science students padding their CVs before graduation, and a genuinely large English-

speaking developer population have all pushed individual GitHub activity upward for reasons that have nothing to do with national strategy. The 2025 Octoverse report describes a broader global shift — GitHub added more than 36 million new developers in a single year, with growth increasingly concentrated in high-population, English-fluent countries in Asia and Africa rather than traditional Western hubs — and Pakistan has ridden that wave rather than engineered its own current.

Contrast that with countries treating open source as deliberate policy. France's interministerial open-source contribution policy gives civil servants explicit permission and process to contribute upstream to the software their agencies depend on. Germany's Sovereign Tech Fund has directly financed open-source infrastructure maintenance as a matter of digital sovereignty, and institutions like the International Criminal Court have migrated away from proprietary office software toward open alternatives for exactly that reason. India's government has run advisory and, at times, preferential open-source procurement policies for two decades through bodies like its Centre for Development of Advanced Computing. Pakistan's own Open Source Resource Centre, under the Ministry of IT, exists on paper but has nothing like that level of sustained institutional weight or contemporary relevance.

The ranking itself also carries a caveat worth stating plainly: contributor count is a volume metric, not a value metric. It says how many Pakistani developers opened pull requests or pushed commits somewhere on GitHub in a year, not how many of them maintain widely-used projects, sit on governing foundations, or capture the kind of long-term influence that translates into standard-setting power. Being in the top 20 by headcount and being a top-20 open-source power are two different achievements, and Pakistan has clearly only secured the first.

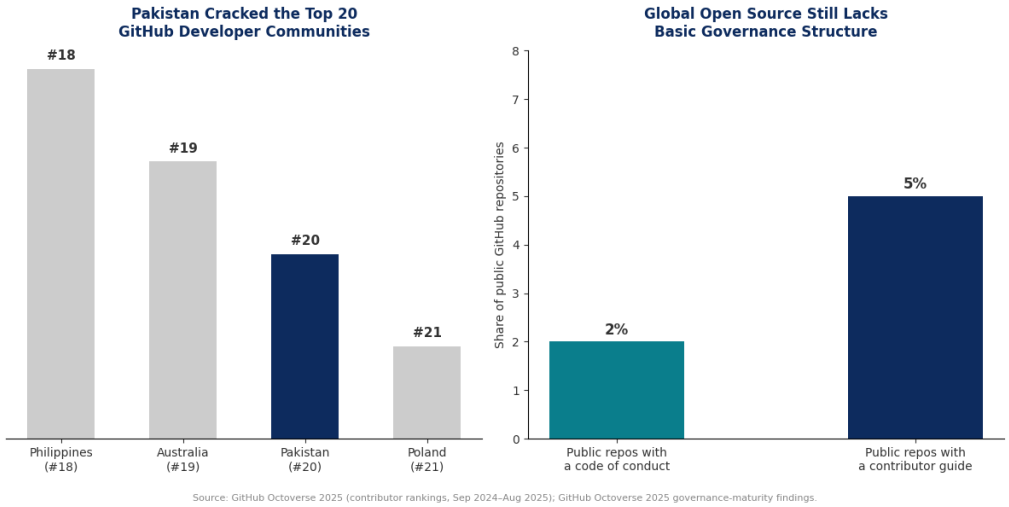

Figure 1: Pakistan has broken into the world's top 20 open-source developer communities by contributor count (left) — but global open source, including Pakistan's contributions to it, still runs on strikingly little formal governance (right). Source: GitHub Octoverse 2025.

Key Findings & Impact

Take the "contributor-to-maintainer gap" that Octoverse 2025 flags as a growing global problem: thousands of people open pull requests, but only a tiny handful of unpaid volunteers actually review, merge, and maintain the codebases that matter. Globally, only about 2 percent of public repositories carry a code of conduct and roughly 5 percent offer any contributor guide — meaning most open-source projects, including many Pakistani developers touch daily, run on informal norms rather than institutional structure. A country producing this much raw contributor volume has an unusually strong case for training some of that talent specifically toward maintainer roles, where influence over a widely-used project's direction, security posture, and roadmap actually sits — but almost no local programme currently does this on purpose.

There is also a quieter national-security and cost angle. Governments in Europe are increasingly citing open-source migration as a matter of digital sovereignty, moving staff off proprietary platforms whose access can be revoked by a foreign government's sanctions decision. Pakistan's own public sector runs almost entirely on licensed proprietary software for which it pays recurring foreign-currency fees, at a time when foreign exchange is scarce and software piracy remains rampant enough to distort official productivity statistics. A public sector that both saved money and reduced foreign dependency by adopting mature open-source alternatives — as several EU governments and the International Criminal Court have already done — would be a far more concrete use of the country's open-source talent base than leaving it to freelancers alone.

The AI shift complicates this further rather than making it moot. Six of the ten fastest-growing open-source repositories in the world last year were AI infrastructure projects — model runtimes, orchestration frameworks, efficiency tools — exactly the layer of the stack Pakistan's own AI policy claims it wants to compete in. Contributing meaningfully to that layer, rather than only consuming it, is one of the more realistic near-term paths to the credibility a national AI strategy needs, and Pakistan's existing contributor base is a genuine head start most competitor countries at similar income levels do not have.

What's Next?

A serious strategy would start small and concrete rather than waiting for a grand national programme. Universities could formally credit sustained open-source contribution the way some already credit competitive programming, giving computer science departments a reason to run maintainer-track electives rather than leaving contribution entirely to student initiative. A revived Open Source Resource Centre could run a public dashboard of Pakistani-maintained projects and connect promising contributors with mentorship from established maintainers abroad — a low-cost, high-leverage intervention given how much of open source runs on exactly that kind of informal apprenticeship already.

On the public sector side, even a modest, sector-by-sector advisory preference for open standards and open-source software in new government IT procurement — start with something low-risk like internal document management or a ministry website, not core financial systems — would create real, budgeted demand for the maintainer-level skills a strategy would otherwise have to build from nothing. Pakistan does not need to out-India India's twenty-year procurement policy or replicate Germany's sovereign tech fund overnight. It needs to notice, officially, that it has already built one of the world's more active developer communities, and start asking what a country actually does with an asset like that instead of discovering it by accident in someone else's annual report.

About the Author

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