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LET THE OTHER 95% OF GREAT PROGRAMMERS IN

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American technology companies want the government to make immigration easier because they say they can't find enough programmers in the US. Anti-immigration people say that instead of letting foreigners take these jobs, we should train more Americans to be programmers. Who's right?

The technology companies are right. What the anti-immigration people don't understand is that there is a huge variation in ability between competent programmers and exceptional ones, and while you can train people to be competent, you can't train them to be exceptional. Exceptional programmers have an aptitude for and interest in programming that is not merely the product of training. [1]

The US has less than 5% of the world's population. Which means if the qualities that make someone a great programmer are evenly distributed, 95% of great programmers are born outside the US.

The anti-immigration people have to invent some explanation to account for all the effort technology companies have expended trying to make immigration easier. So they claim it's because they want to drive down salaries. But if you talk to startups, you find practically every one over a certain size has gone through legal contortions to get programmers into the US, where they then paid them the same as they'd have paid an American. Why would they go to extra trouble to get programmers for the same price? The only explanation is that they're telling the truth: there are just not enough great programmers to go around. [2]

I asked the CEO of a startup with about 70 programmers how many more he'd hire if he could get all the great programmers he wanted. He said "We'd hire 30 tomorrow morning." And this is one of the hot startups that always win recruiting battles. It's the same all over Silicon Valley. Startups are that constrained for talent.

It would be great if more Americans were trained as programmers, but no amount of training can flip a ratio as overwhelming as 95 to 5. Especially since programmers are being trained in other countries too. Barring some cataclysm, it will always be true that most great programmers are born outside the US. It will always be true that most people who are great at anything are born outside the US. [3]

Exceptional performance implies immigration. A country with only a few percent of the world's population will be exceptional in some field only if there are a lot of immigrants working in it.

But this whole discussion has taken something for granted: that if we let more great programmers into the US, they'll want to come. That's true now, and we don't realize how lucky we are that it is. If we want to keep this option open, the best way to do it is to take advantage of it: the more of the world's great programmers are here, the more the rest will want to come here.

And if we don't, the US could be seriously fucked. I realize that's strong language, but the people dithering about this don't seem to realize the power of the forces at work here. Technology gives the best programmers huge leverage. The world market in programmers seems to be becoming dramatically more liquid. And since good people like good colleagues, that means the best programmers could collect in just a few hubs. Maybe mostly in one hub.

What if most of the great programmers collected in one hub, and it wasn't here? That scenario may seem unlikely now, but it won't be if things change as much in the next 50 years as they did in the last 50.

We have the potential to ensure that the US remains a technology superpower just by letting in a few thousand great programmers a year. What a colossal mistake it would be to let that opportunity slip. It could easily be the defining mistake this generation of American politicians later become famous for. And unlike other potential mistakes on that scale, it costs nothing to fix.

So please, get on with it.

Notes

[1] How much better is a great programmer than an ordinary one? So much better that you can't even measure the difference directly. A great programmer doesn't merely do the same work faster. A great programmer will invent things an ordinary programmer would never even think of. This doesn't mean a great programmer is infinitely more valuable, because any invention has a finite market value. But it's easy to imagine cases where a great programmer might invent things worth 100x or even 1000x an average programmer's salary.

[2] There are a handful of consulting firms that rent out big pools of foreign programmers they bring in on H1-B visas. By all means crack down on these. It should be easy to write legislation that distinguishes them, because they are so different from technology companies. But it is dishonest of the anti-immigration people to claim that companies like Google and Facebook are driven by the same motives. An influx of inexpensive but mediocre programmers is the last thing they'd want; it would destroy them.

[3] Though this essay talks about programmers, the group of people we need to import is broader, ranging from designers to programmers to electrical engineers. The best one could do as a general term might be "digital talent." It seemed better to make the argument a little too narrow than to confuse everyone with a neologism.

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■ [Spanish Translation](#)
