

Not this...

February 12, 2008

Comparative Language Job Trend Graphs

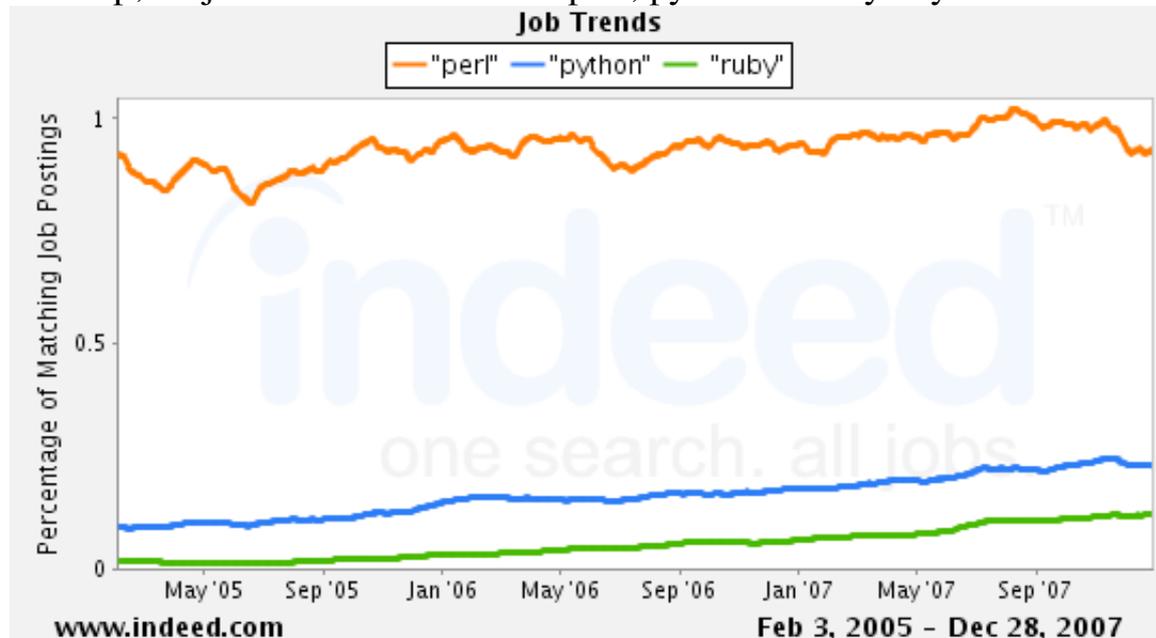
Filed under: [software](#) — TimBunce @ 12:46 am [Edit This](#)

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I researched these comparative job trend graphs for my Keynote at the 2007 London Perl Workshop, and then added a few more for this blog post.

The graphs are from [indeed.com](#), a job data aggregator and search engine. They're all *live*, so every time you visit this page they'll be updated with the current trend data (though it seems the underlying data isn't updated often). My notes between the graphs relate to how they looked when I wrote this post in February 2008 (and the graphs were all Feb 2005 thru Dec 2008).

First up, all jobs that even *mention* perl, python or ruby anywhere in the description:

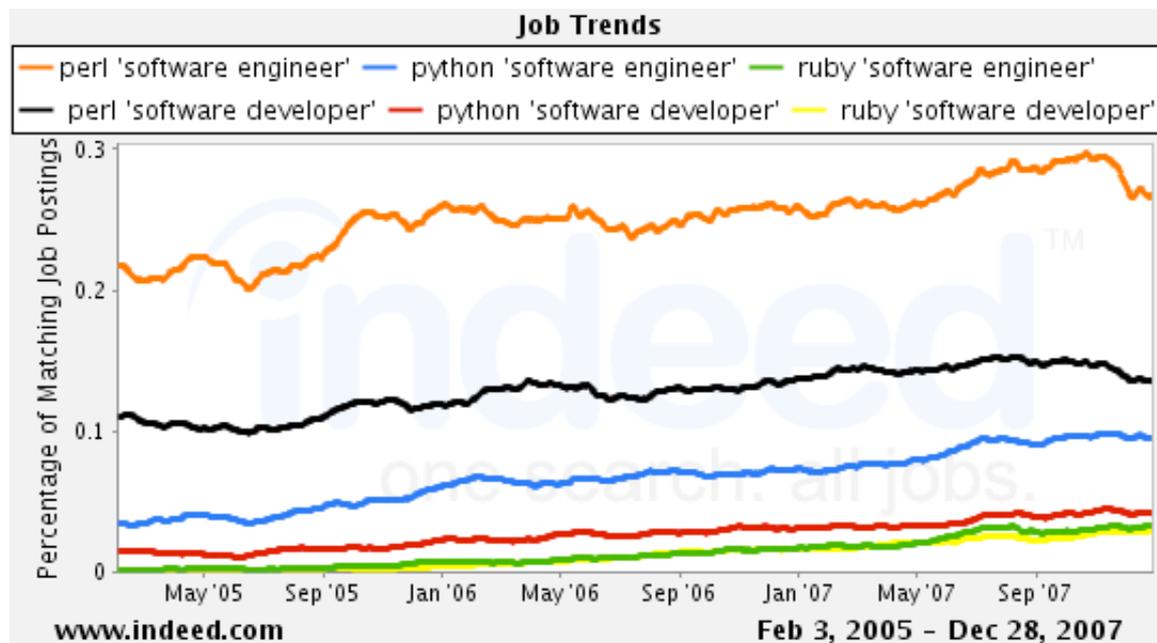


The most amazing thing to me about this graph is that it indicates that 1% of *all* jobs mention perl. Wow.

(Perhaps the profile of the jobs indeed.com is a little skewed towards technical jobs. If it is

then I'm assuming it's equally skewed for each of the programming languages. **Note:** An addendum below shows that ruby is getting ~17% boost through false positive matches from other jobs, like Ruby Tuesday restaurants. That applies to the graphs here that don't qualify the search with an extra term like 'software engineer'.)

Here's a slightly more focussed version that compares languages mentioned in jobs for "software engineer" or "software developer" roles:



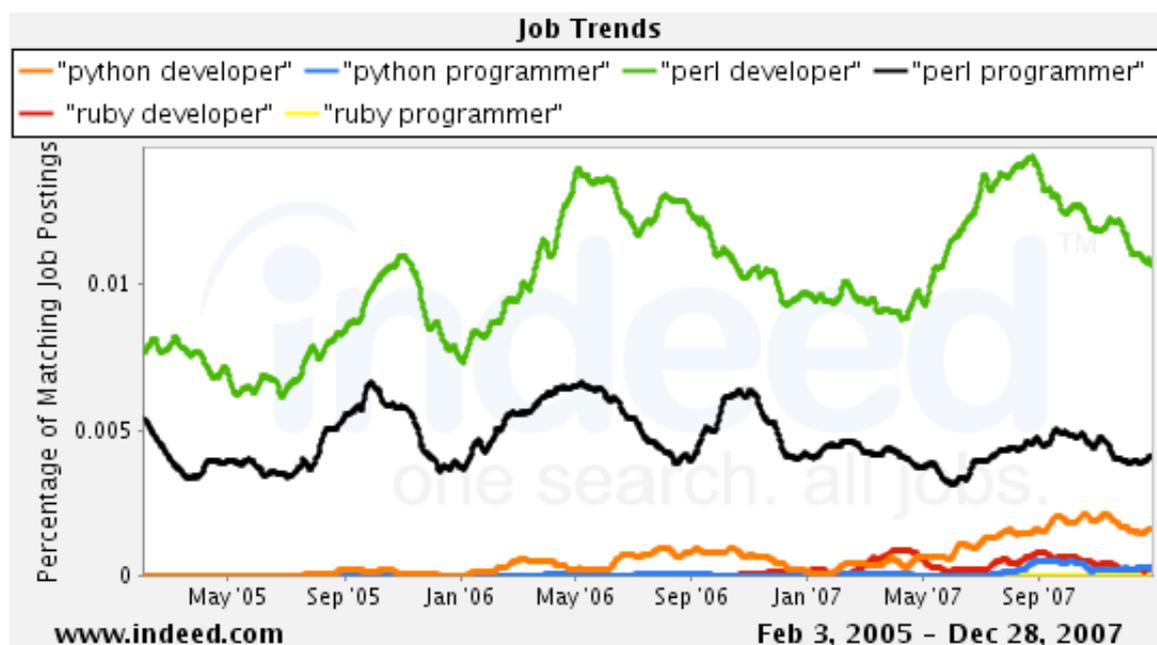
A similar pattern. The narrowing of the gap between Perl and the others languages looks like good evidence of Perl's broad appeal as a general purpose tool beyond the pure "software engineering/development" roles.

I wanted to focus on jobs where developing software using a particular language was the *principle focus* of the job. So then I looked for "foo developer" jobs:



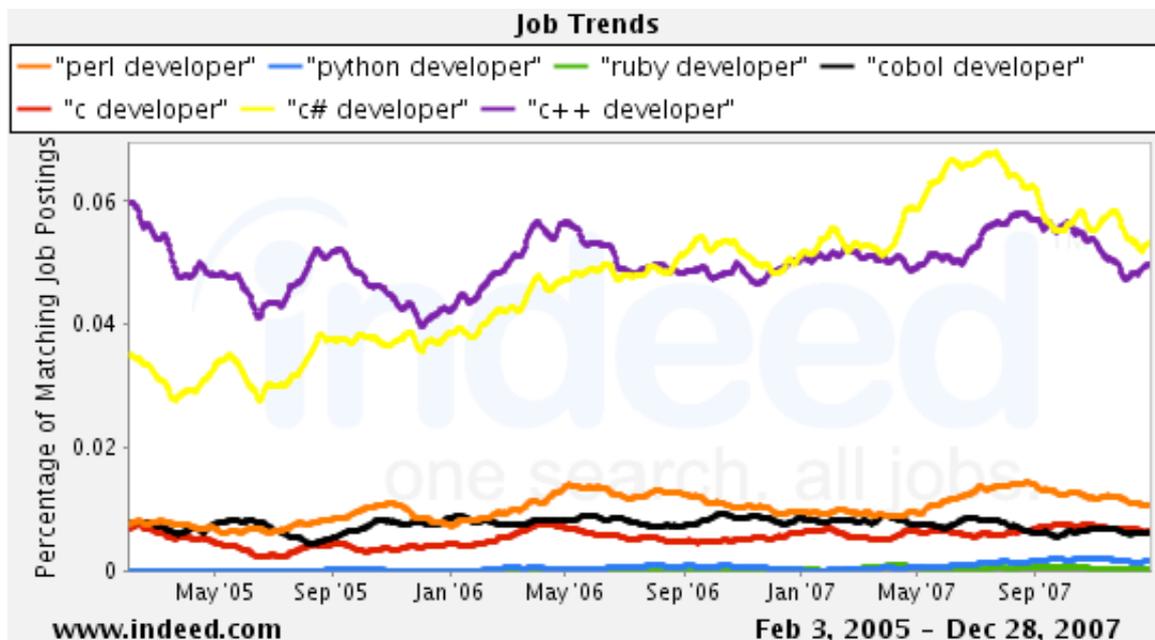
That increases the gap between Perl and the others. Perhaps a reflection of Perl's maturity - that it's more entrenched so more likely to be used in the name of the role.

But do people use "foo *developer*" or "foo *programmer*" for job titles? Let's take a look:



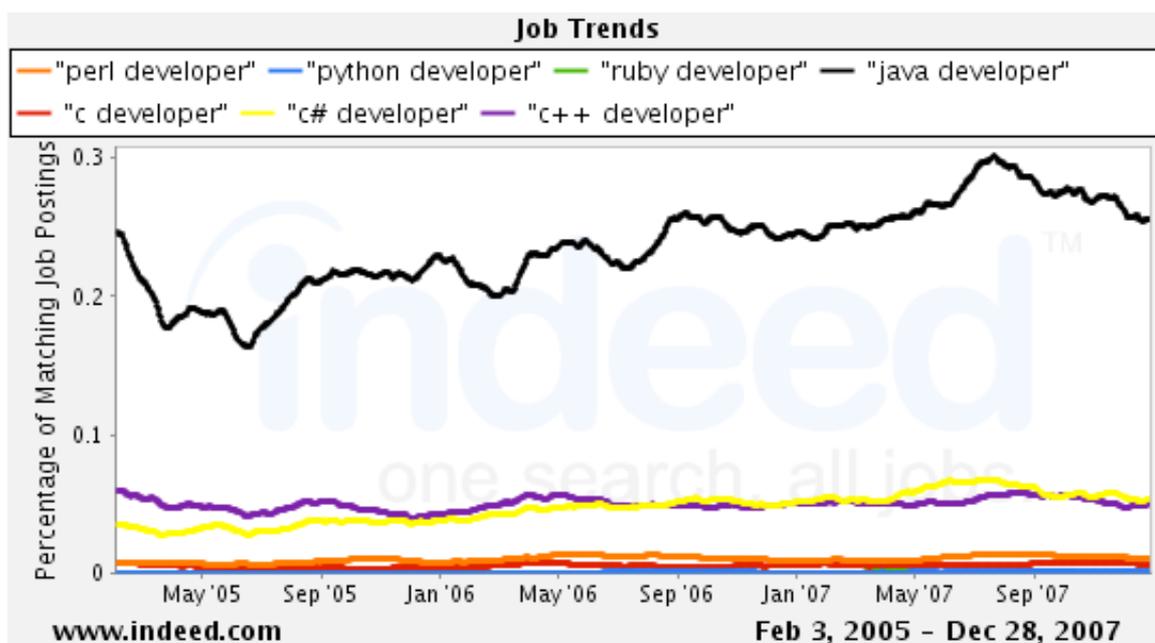
So "foo *developer*" is the most popular, but "foo *programmer*" is still significant, especially for Perl. (It's a pity there's no easy way to combine the pairs of trend lines. That would raise Perl even further.)

To keep us dynamic language folk in our place, it's worth comparing the trends above with those of more static languages:



C++ and C# dwarf the dynamic languages. C and cobol are still alive and well, just.

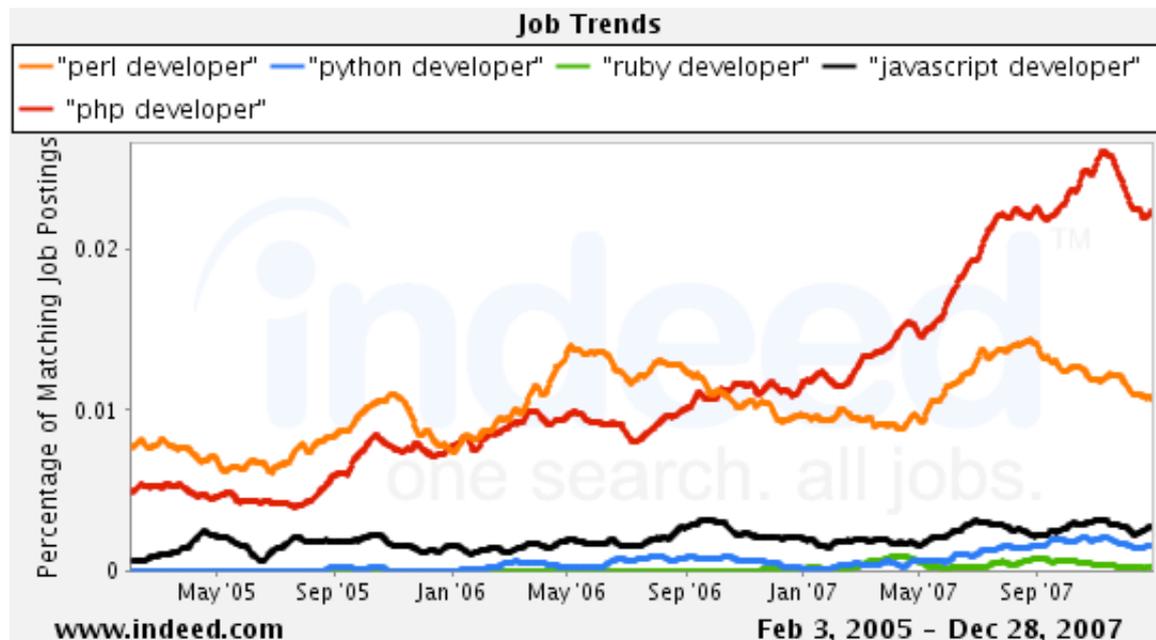
Then, to give the C++ and C# folk some perspective, let's add Java to the mix:



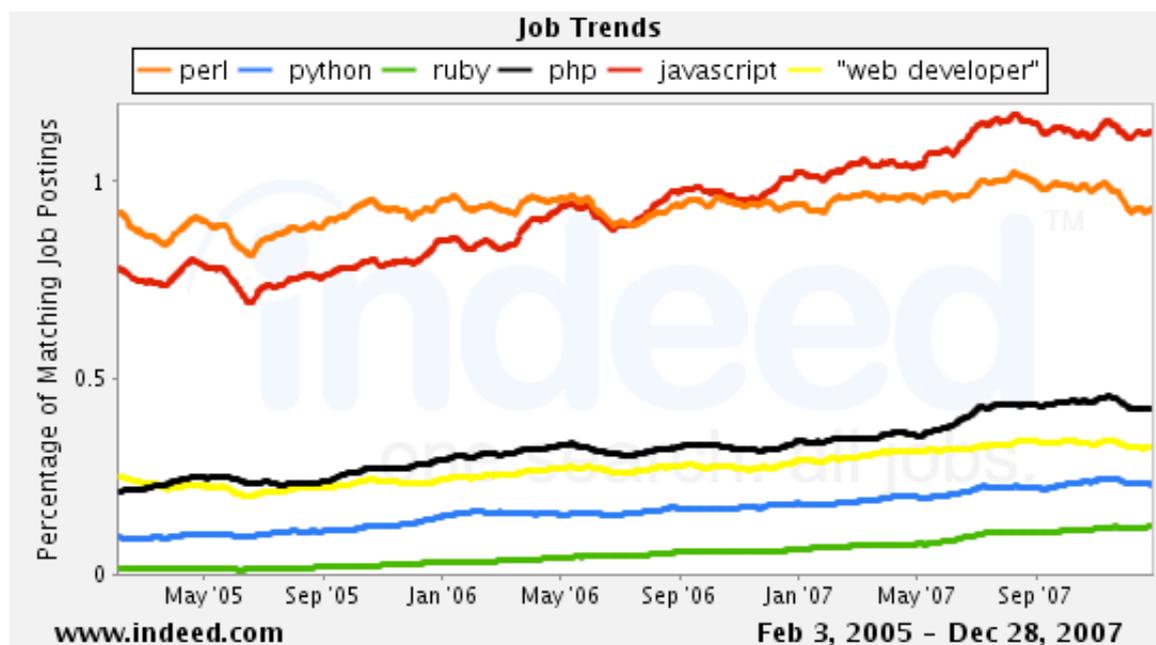
C++ and C# may dwarf the dynamic languages, but even they are dwarfed by Java.

Let's take a slight detour now to look at web related work. (It's a detour because this post isn't about web related work, it's about the jobs market for the three main general purpose dynamic languages. People doing web work can tend to assume that everything is about web work.)

We'll start by adding in two more specialist languages, PHP and JavaScript:

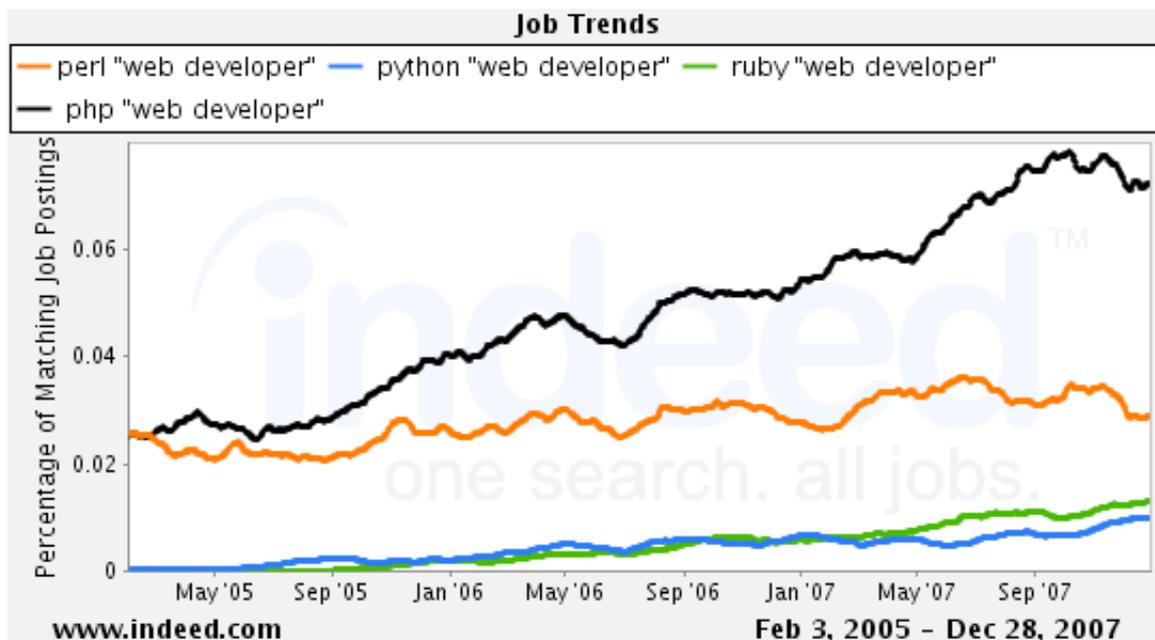


I'm not surprised by the growth of PHP, though I'm sad that so many people are being introduced to 'programming' through it. I'm more surprised by the lack of height and growth in JavaScript. I presume that's because it's still rare for someone to be primarily a "JavaScript developer". (That'll change.) Let's check that:



That's much closer to what I'd expected. PHP is a popular skill, but is mentioned in less than half the jobs than Perl is. JavaScript, on the other hand, is in great and growing demand.

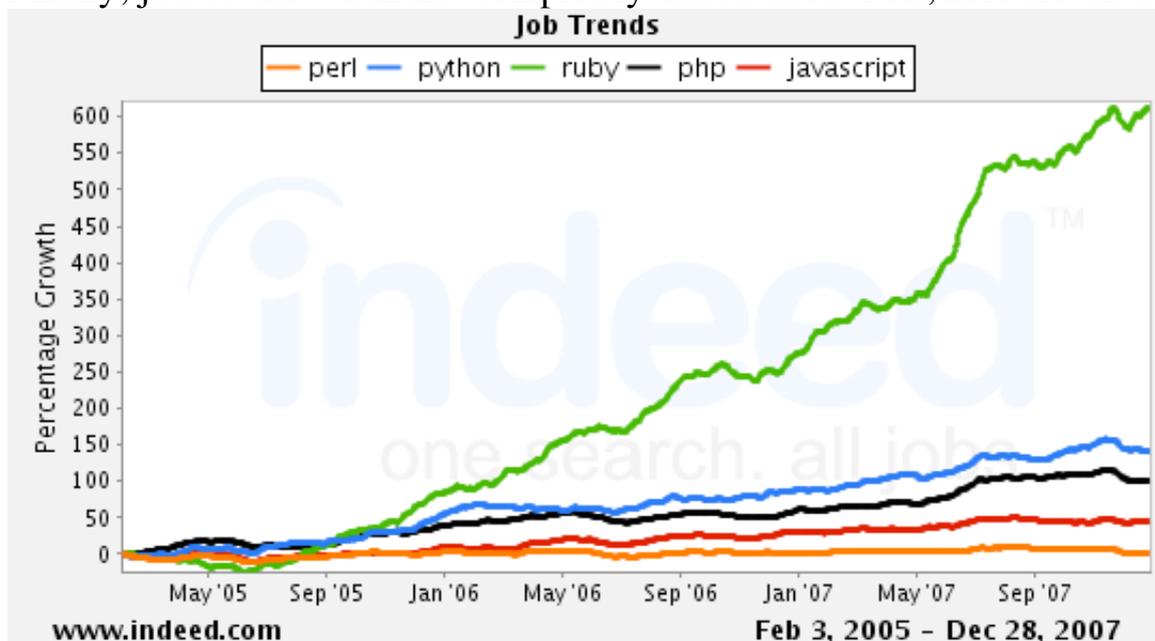
Let's look at the "web developer" role specifically and see which of the languages we're interested in are mentioned most frequently:



I think this graph captures the essence of why people think Perl is stagnant. It's because Perl hasn't been growing much in the 'web developer' world. People in that world are the ones most likely to be blogging about it and, I've noticed, tend to generalize their perceptions.

(If you're interested in PHP, Java, ASP and JavaScript and look [here](#) you'll see that they all roughly follow the PHP line at about twice the height. JavaScript is at the top with accelerating growth.)

Finally, just to show I'm not completely biased about Perl, here are the relative trends:



This kind of graph always reminds me of small companies that grow by a small absolute amount, say two employees growing to four, and then put out a press release saying they're the "fastest growing company" in the area, or whatever. The graph looks striking now (Q1 2008) but means little. If it looks much like that in two years time, then it'll be impressive.

Similarly, the fact that Perl is still growing its massive installed base over this period *is* impressive. (Seen most clearly by the second graph.) Perl 5 has been around for 14 years, and Perl itself for 21.

The Perl community isn't great at generating "Buzz" that's visible outside the community, it's just quietly getting on with the job. Lots of jobs. That lack of buzz helps create the impression that the Perl community lacks vitality relative to other similar languages. Hopefully this post, and [others](#), go some small way towards correcting that.

p.s. For an alternative, more geographic view, take a look at the [Dynamic Language Jobs Map](#) ([about](#)).

Addendum:

It turns out that approximately 14% of "ruby" jobs relate to restaurants - mostly the Ruby Tuesday chain. So I investigated how false positives affected the single-keyword searches I've used in some of the graphs. (I'm going to assume that "foo developer" is sufficiently immune from false positives.)

I searched for Perl and then added negative keywords (-foo -bar ...) until I'd removed almost all of the likely software related jobs. I ended up with this list (which shows that indeed.com don't use [stemming](#), which is sad and dumb of them):

```
perl -developer -developers -engineer -software -programmer -programmers -
programming -development -java -database -sql -oracle -sybase -scripting -scripter
-coder -linux -unix -protocol -C -C++ -javascript -computing
```

Then I did the same search but with python or ruby instead of perl. Here are the results:

language	all matches	filtered matches	inappropriate matches
perl	29987	6	0.2% false
python	7794	20	0.2% false
ruby	4624	794	17% false

Ruby is well below python (and far below perl) in the first graph, yet that includes this 17% boost from inappropriate matches. You have to marvel at Ruby's ability to gain mind-share, if not market-share.

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