-

  Time running out to get your hands on Inspirefest early bird tickets

-

  Construction begins on €500m Limerick Twenty Thirty development

-

  Dave, technology and the power of people

-

  Is UX the new 'going to the gym'?

-

  Technology Ireland names eShopWorld as Company of the Year

-

  Will someone please shout stop to Brexit!

-

  The world after PSD2: Compliant or competitive?

-

  What can online retailers do to prevent Black Friday website crashes?

-

  YouTube strengthens rules around kids' videos amid growing concerns

-

  Facebook admits anti-discrimination advertising policy isn't working

-

  Is blockchain more hype than revolution?

-

  PwC global FS leader: 'Blockchain is not going to change the world'

-

  US immigration body seeking automated social media monitoring tools

-

  EU privacy regulators could launch investigation into Uber cover-up

-

  What happens when supply chain meets blockchain?

-

  IBM Ireland's Fergal O'Sullivan on fintechs harnessing new technologies

-

  Cavan tech centre emerges as fifth Vodafone-Siro Gigabit Hub

-

  UK reveals tough new broadband ad rules for ISPs

-

  Don't be fooled – net neutrality could be killed in Europe, too

-

  UK budget includes £500m investment in tech infrastructure

-

  US telecoms regulator vows to dismantle net neutrality

-

  Where in the world is the cheapest broadband plan?

-

  Virgin Media's digital evolution in Belfast brings data revolution to life

-

  StoryTracks is on an epic mission to bring local stories to life

-

  Weekend takeaway: Nuggets of wisdom about fintech

-

  20 of Europe's hottest fintech start-ups to watch in 2018

-

  Enterprise Ireland launches €150,000 Agile Innovation Fund

-

  Investors divide in peer-to-peer lending

- ALL
- INNOVATION
- MACHINES
- EARTH SCIENCE

Weekend takeaway: Let your ideas fly into the sci-tech sky

Challenge yourself with these 10 Maths Week brainteasers

An Cosán co-founder Dr Ann Louise Gilligan dies after short illness

Inspirefest 2017's free Family Fringe to be a maker's paradise this summer

David Puttnam steps down from role as Irish digital champion

Doodling and maths: A matter of black and white

-

  Irish CO2e levels soar in 2016 as renewable energy production falls

-

  Efforts to save dying coral reefs bolstered by stunning 3D map

-

  Ireland's STEM education system facing chronic shortage of teachers

-

  Teagasc is sowing the seeds for more women in STEM

-

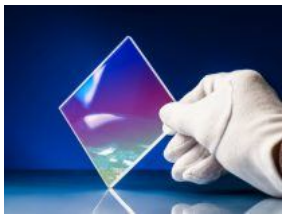
  Team uses CRISPR to build the world's smallest tape recorder

-

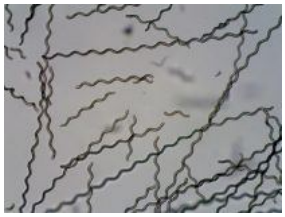
  Everything is illuminated: Light pollution increases dramatically

-

  Deutsche Telekom to launch new NB-IoT lab in Dortmund

- 

  Behold, 9 wonder materials for the world of tomorrow

- 

  Tiny robots in our blood could soon be used to sniff out and treat cancer

-

  UL has high-flying ambition to tap into Ireland's aerospace sector

-

  UK budget gives green light to let autonomous cars on roads by 2021

-

  AI will boost Ireland's GDP by €48bn by 2030

-

  How many people could live on Earth?

-

  Forget a climate shift in centuries, more like decades, climatologists claim

-

  WeForest doubles crowdfunding target to empower Indian village

-

  World awaits birth of ‘baby dragons’ in Slovenia

-

  Gold and platinum discovered in south-east Irish streams

-

  The bees are still in trouble, so we are too

- ALL
- ADVICE
- PEOPLE
- EMPLOYERS
- JOBS

-

  FIT Ltd launches new ICT Level 6 apprenticeship programme

-

  What kind of exciting career opportunities are there in fintech?

[Vodafone Ireland launches #CodeLikeaGirl student initiative]

[Everything you wanted to know about Cohort, the newest networking tool]

[Major surge in people interested in remote working]

[Almost 600 jobs announced around Ireland this week]

[What do Java developers need to know about Java 9?]

[These 3 changes can make a big difference in your engineering calculations]

[How to get along with the difficult people in your office]

-

  Why should you consider a job with a fintech start-up?

-

  Long day at work? How to make sure you get a good night's sleep

-

  Is micromanagement in the workplace being normalised?

-

  'The quality of your work relationships is almost as important as the quality of your work'

-

  Would you bring your parents to work? LinkedIn employees did

-

  Zendesk encourages employees to pursue their passions

-

  Amgen's graduate programme opens up a range of opportunities

-

  These are 9 of the greatest female STEM role models in film

-

  What is a typical day like for a consulting partner at Deloitte?

-

  6 top international companies hiring in data right now

-

  How do companies ensure diversity in their workforce?

-

  6 companies hiring in fintech right now

-

  7 US companies hiring in Ireland right now

-

  7 of the coolest science jobs in the world

-

  Thinking about a career in marketing? An analytical mind is helpful

-

  Md7 to hire 40 in bid to expand European HQ in Dublin

-

  UK pharmaceuticals company Wasdell announces 300 new positions in Dundalk

-

  Carne International announces 50 new positions in Kilkenny

-

  Taxback International to hire 80 at Kilkenny headquarters

-

  Irish security firm Netwatch announces 10 new tech hires

-

  5 of the hottest careers in fintech

WhatsApp debuts feature that allows users to delete accidental messages

Inspirefest: The Podcast makes its debut with stellar first episode

Irish teachers and parents don’t feel equipped to discuss online safety

Rents in Dublin have ballooned by 37pc since 2012, report shows

Game of Thrones fans can now plan trips to Northern Irish filming locations with new digital map

Google starting to prompt users with a quiz if it thinks they’re depressed

-

  Twitter is testing a feature allowing users to bookmark tweets

-

  Warning: Illegal streaming boxes are a fire hazard

-

  Instagram now allows users to add any video or image to Stories

-

  Google launches Family Link internet safety app in Ireland

-

  Apple's iOS 11 pips past 10.3 in just under a month

-

  Razer launches Android smartphone geared towards gamers

-

  Just what Pinterest users were pining for: boards within boards

-

  It feels cinematic: YouTube rolls out a major redesign across mobile and desktop

-

  S-Town and My Dad Wrote a Porno on way to Dublin for podcast fest

-

  Google adds SOS alert capabilities to Search and Maps

-

  Google Maps brings Street View to the International Space Station

-

  Google takes on Facebook with new algorithmic news feed

-

  The best Black Friday advice and 5 deals worth a look

-

  Who are Ireland's most-followed people on Twitter?

-

  While we were laughing at ‘covfefe’, millions of Twitter bots joined Trump’s ranks

-

  Carnage in Manchester: Social media captures horror of attack at Ariana Grande concert

-

  What is the Antikythera mechanism and why is it so important today?

-

  ‘My Happy Robot Tom’ is today’s glorious Google Doodle

- ALL

-

  At Deloitte, you’re not on your own

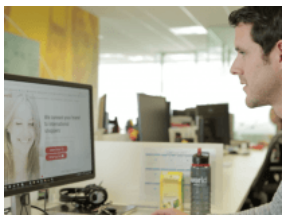
-

  How to reskill for the future of work

-

- What you need to know about the future of HR

- ‘At Kemp, we’re pretty much always using new technologies’

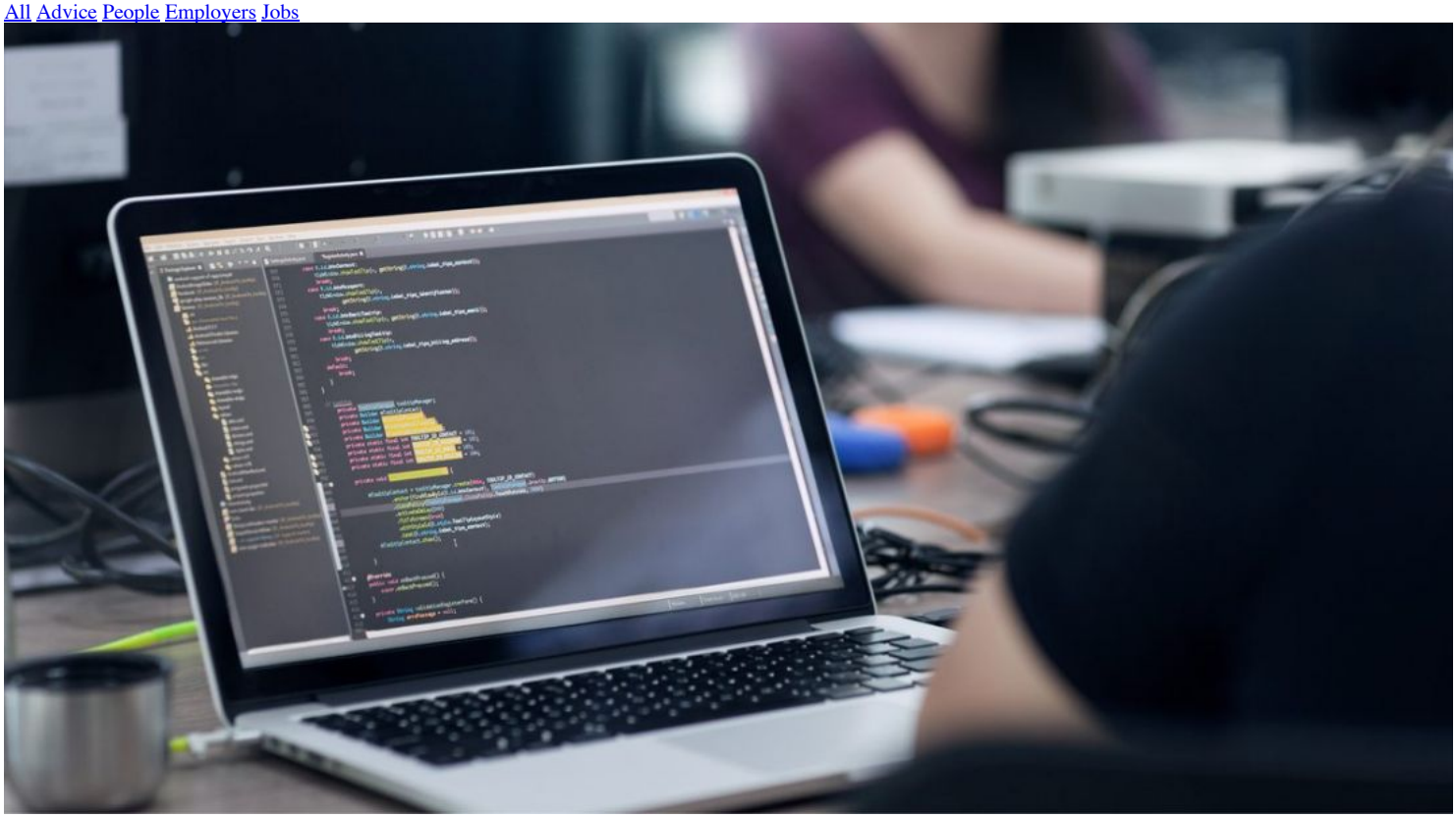


- Want to work at eShopWorld? Here’s what it’s looking for

- Researchfest 2017: Breaking down the invisible walls that divide us

- ADVERTISE
- SUBSCRIBE
- CONTACT
- ABOUT

All Advice People Employers Jobs



Advice
Image: ProStockStudio/Shutterstock

What is the most popular language for machine learning?

13 Feb 2017791 Shares

When it comes to machine learning and data science, there are so many language options to choose from. Data scientist Jean-Francois Puget does some analysis to decide which one is best.

What programming language should you learn to get a machine learning or data science job? That's the silver bullet question. I could provide my own answer to it and explain why, but I'd rather look at some data first. After all, this is what machine learners and data scientists should do: look at data, not opinions.

INSPIRE fest|17 Don't miss Europe's leading sci-tech event
EARLY BIRD TICKETS ON SALE NOW

So, let's look at some data. I will use the trend search available on Indeed. It looks for occurrences over time of selected terms in job offers, and gives an indication of what skills employers are seeking.

(Note however, that it is not a poll on which skills are effectively in use, rather, it is an advanced indicator of how skill popularity evolves.)

I searched for skills used in conjunction with 'machine learning' and 'data science', where skills are one of the prominent programming languages Java, C, C++ and JavaScript.

I also included Python and R, which we know are popular for machine learning and data science, as well as Scala, given its link to Spark, and Julia, which some think is the next big thing.

Running this query, we get the data we are looking for.

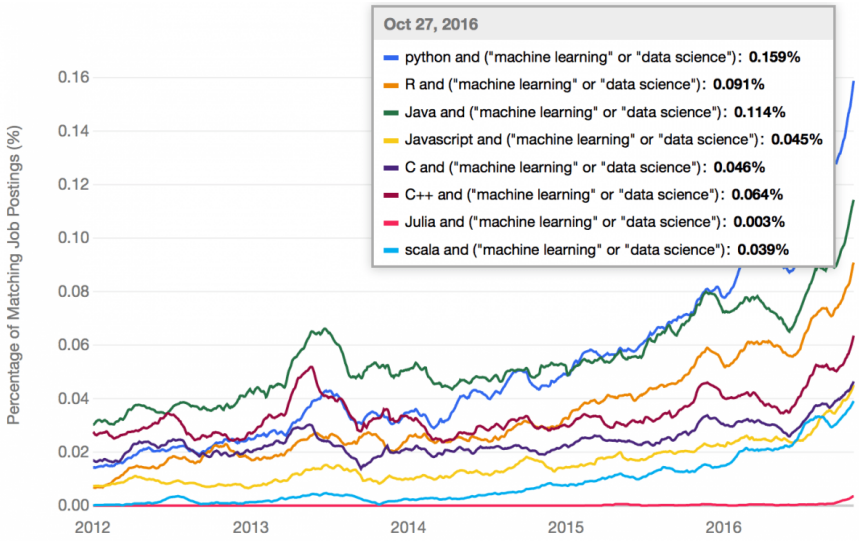


Image: Indeed.com

When we focus on machine learning, we get similar data.

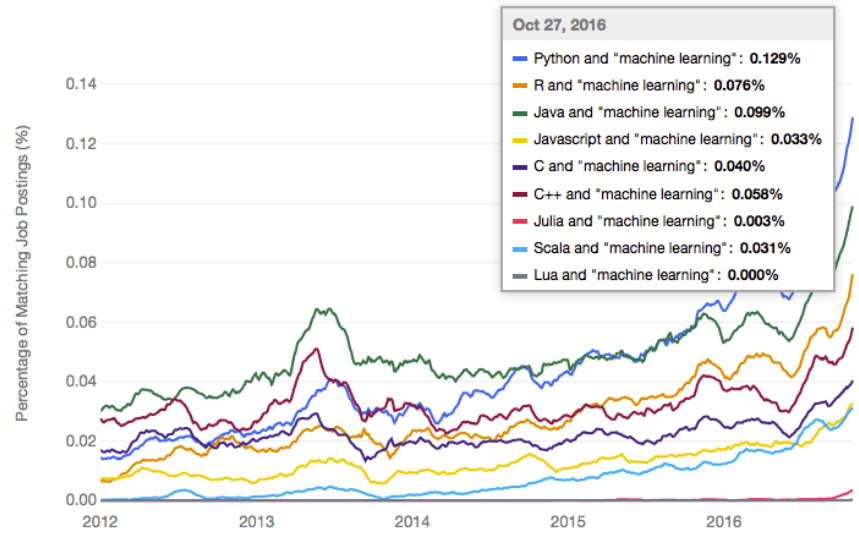


Image: Indeed.com

What can we derive from this data?

First of all, we see that one size does not fit all. A number of languages are fairly popular in this context.

Second, there is a sharp increase of popularity for all these, reflecting the increased interest in machine learning and data science over the last few years.

Third, Python is the clear leader, followed by Java, then R, then C++.

Python's lead over Java is increasing, while the lead of Java over R is decreasing. I must admit, I have been surprised to see Java at second place – I was expecting R instead.

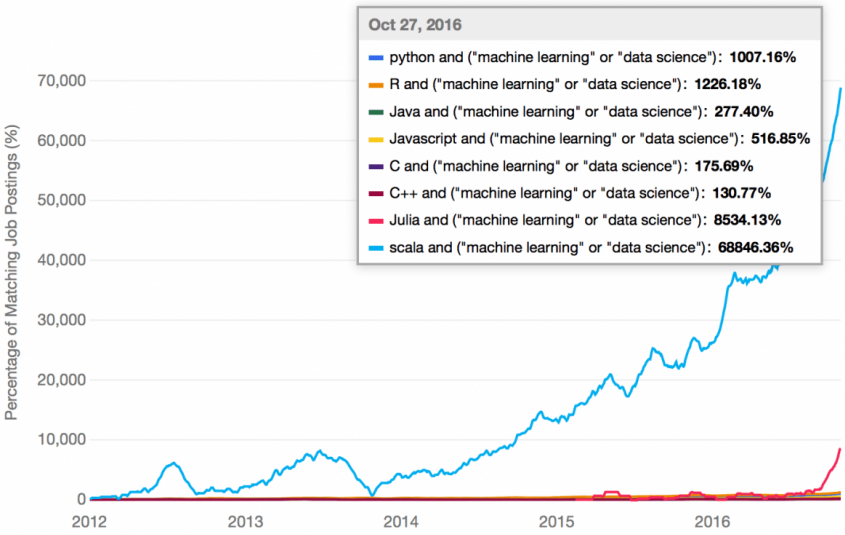


Image: Indeed.com

Fourth, Scala's growth is impressive. It was almost non-existent three years ago, and is now in the same ballpark as more established languages. This is easier to spot when we switch to the relative view of the data.

Fifth, Julia's popularity is not anywhere near the others, but there is definitely an increase in the recent months.

Hiring Now

Pramerica

- The largest employer in northwest Ireland

accenture

- Always at the cutting edge of new innovation

Fidelity INVESTMENTS

- Be part of a globally successful team

Bank of America Merrill Lynch

- Help develop the future of sales and trading

Will Julia turn into one of the popular languages for machine learning and data science? Time will tell.

If we ignore Scala and Julia in order to be able to zoom in on the other languages' growth, then we can confirm that Python and R are growing faster than general purpose languages.

It may be that R popularity will pass that of Java soon, given the sheer difference in growth rate.

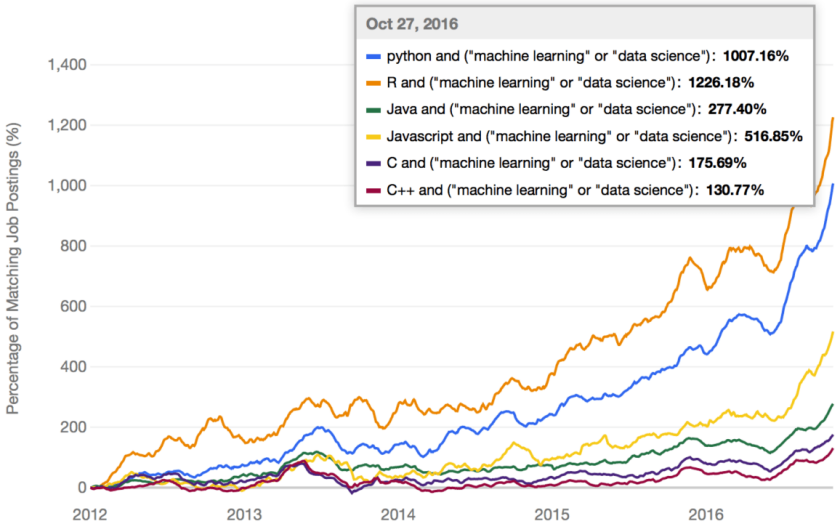


Image: Indeed.com

When we focus on deep learning with this query, the data is quite different:

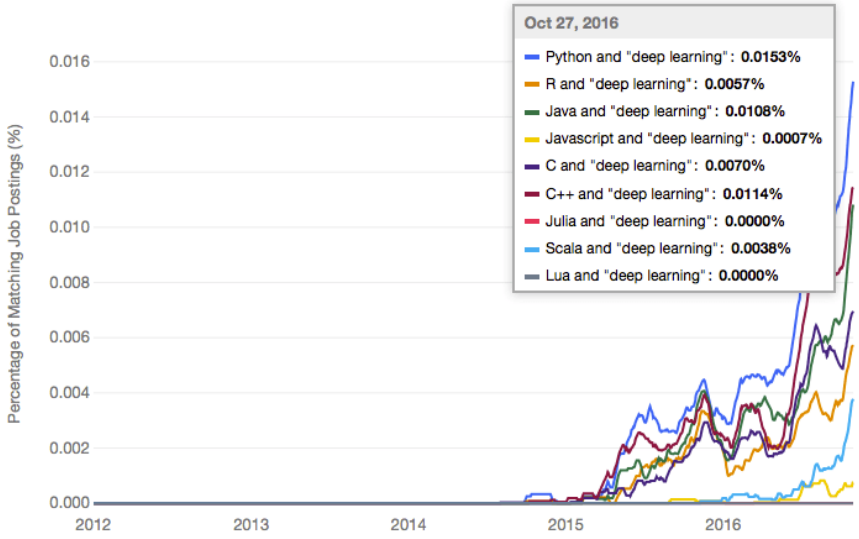


Image: Indeed.com

There, Python is still the leader, but C++ is now second, then Java, and C in fourth place. R is only in fifth place. There is clearly an emphasis on high performance computing languages here.

Java is growing fast though, and could reach second place soon. R isn't going to be near the top any time soon. What surprises me is the absence of Lua, although it is used in one of the major deep learning frameworks, Torch. Julia isn't present either.

The answer to the original question should now be clear. Python, Java, and R are most popular skills when it comes to machine learning and data science jobs. If you want to focus on deep learning rather than machine learning in general, then C++, and to a lesser extent C, are also worth considering.

Remember however, that this is only one way of looking at the problem. You may get a different answer if you are looking for a job in academia, or if you just want to have fun learning about data science and machine learning during your spare time.

What about my personal answer? Besides having support from many top machine learning frameworks, Python is good fit for me because I have a computer science background. I would also feel comfortable with C++ for developing new algorithms, given that I've programmed in that language for most of my professional life.

But this is me, and people with different backgrounds may feel better with another language. A statistician with limited programming skills will certainly prefer R. A strong Java developer can stay with his favourite language, as there are significant open sources with Java API.

Therefore, my advice would be to read other blogs discussing the same question before investing significant time into learning a language.

By Jean-Francois Puget

Jean-Francois Puget is currently the technical leader for IBM machine learning and optimisation offerings. A data scientist by trade, Puget has more than 25 years' software experience.

A version of this article originally appeared on the IBM developerWorks blog.

Looking for jobs in tech or science? Check out our Employer Profiles for information on companies hiring right now and sign up for our Career Republic e-zine for a weekly digest of sci-tech careers news and advice.

Tweet
Share
Email
Share
More
Share
Pin This
Reddit

Related: computer programmers, skills, Opinion, Indeed, data science, Guest Column, IBM

Make sure you never miss an opportunity

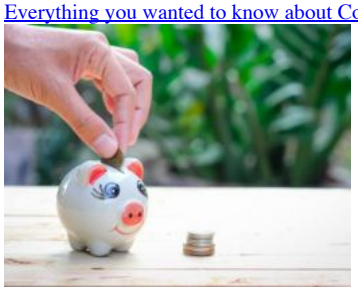
Follow us and stay informed!

More from careers

What do Java developers need to know about Java 9?

FIT Ltd launches new ICT Level 6 apprenticeship programme

Everything you wanted to know about Cohort, the newest networking tool



[5 of the hottest careers in fintech]

Loading

[Read More]
Loading now, one moment please!
siliconrepublic

- Home
- About
- Contact

- Advertise
- Subscribe
- Privacy Policy

All content copyright 2002-2017 Silicon Republic Knowledge & Events Management Ltd. Reproduction without explicit permission is prohibited. All rights reserved.
Designed by Zero-G and Square1.io