



VIETNAM IT NATION

VIETNAM IT MARKET REPORT 2020

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“After all, in order to achieve impressive results as other advanced countries, Vietnam needs to accelerate its labor productivity. The confrontation between the world’s development models ultimately lies in the fact that which model creates higher productivity. That is also the reason why we see great world’s powers competing against each other primarily not about trade, but technology. As technology is the way to help Vietnam get rid of its short-sightedness and strive for ambitious visions, the dream of Vietnam becoming an IT nation will soon come true.”

In the last 5 years, Vietnam has been going through positive changes in digital transformation, thus moving forward into a digital economy and a digital society. Therefore, the wave of tech startups as well as startup projects from large companies, has continuously been on the rise. With the entire technology industry’s substantial growth in general, it can be said that by 2020, Vietnam will be considered as an IT nation of Southeast Asia. Minister of Information and Communications Nguyen Manh Hung said that an additional 50,000 IT businesses (ICT) is necessary for Vietnam to accelerate its digital transformation. A trend called Make In Vietnam is on a strong momentum where the developers and technology experts have considered more about bringing Vietnamese products to the world. Product companies are gradually showing their appearance.

At present, the IT industry is being evaluated as one of the leading industries in Vietnam. There is a number of more than 153 institutions training 50,000 IT personnel. According to experts’ assessment, Vietnam will be an ideal destination for leading technology companies in the world and the region to have their product development located. Particularly in the Vietnam market, there are numerous small and large startups developing potential projects directly related to AI and Machine Learning, which creates an abundance of outstanding values for the technology industry as a whole.

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1 VIETNAM NEW DESTINATION

COUNTRY'S DATA

POPULATION ⁽¹⁾
96,2M (2019)

GDP ⁽³⁾
\$245,214B (2018)
GROWTH RATE 7.02% (2019) ⁽²⁾

GDP PER CAPITA ⁽⁴⁾
\$2.587 (2018)
INCREASED BY \$198
COMPARED TO 2017

DEMOGRAPHICS

LABOR FORCE
FROM 15 YEARS OLD
55,8M ⁽²⁾
(2019)

AVERAGE WORKING AGE
30,5 YEARS

LITERACY RATE
FROM 15 YEARS OLD
95.8% ⁽¹⁾

INDEX & RANKING

GLOBAL INNOVATION INDEX
GII
45/129
ACCORDING TO WORLD INTELLECTUAL
PROPERTY ORGANIZATION (WIPO), 2019

GLOBAL COMPETITIVENESS INDEX
GCI
67/141
ACCORDING TO THE WEF 2019
IMPROVE 10 PLACES COMPARED TO 2018
ICT ADOPTION INDEX INCREASES
50 SCORES (FROM 95 TO 41)

HUMAN CAPITAL INDEX
(HCI)
0,67 ⁽³⁾
48/157 - TOP 2 SEA
WORLD BANK (WB, 2018)

FIRST 9 MONTHS OF 2019 FDI
\$26,16B
US NEWS & WORLD REPORT

RANKED
8th
TOP 20 BEST COUNTRIES TO INVEST IN
ACCORDING TO US NEWS & WORLD REPORT

VIETNAM ICT INDUSTRY DATA

ICT EXPORT

\$91,5B⁽⁵⁾ (ESTIMATED 2019)

SOFTWARE EXPORT TURNOVER

\$3,5B⁽⁶⁾ (2018)

BUSINESSES IN ICT SECTOR

50.000 BUSINESSES (2018)

FDI 2018 FOR TECHNOLOGY SCIENCE SECTOR

\$2,1B⁽⁷⁾ (ESTIMATED 2019)

ICT TOTAL REVENUE

\$112,35B⁽⁵⁾ (ESTIMATED 2019)

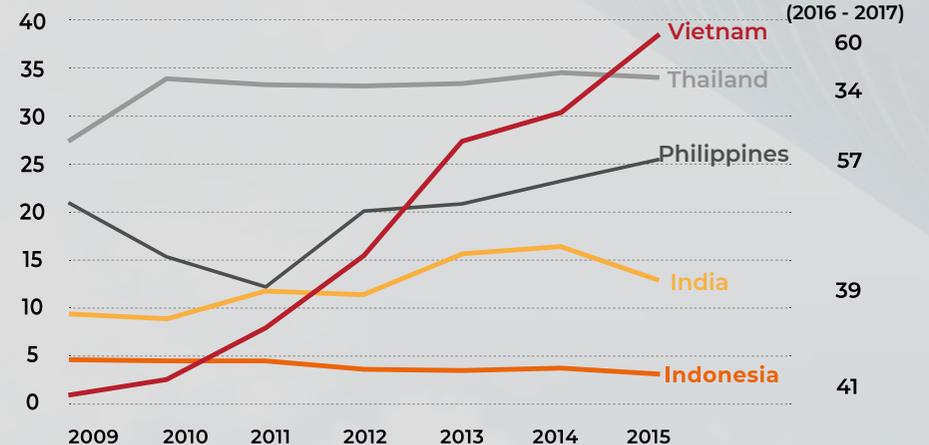
SOFTWARE INDUSTRY REVENUE

\$5,0B⁽⁵⁾ (ESTIMATED 2019)

SOFTWARE INDUSTRY'S GROWTH RATE

13,8%⁽⁵⁾

High technology exports are higher more than competitive regional peers (Unit: Bil USD)



WEF Competitiveness Ranking (2016 - 2017)

Vietnam 60
Thailand 34
Philippines 57
India 39
Indonesia 41

Source: World Bank, WEF

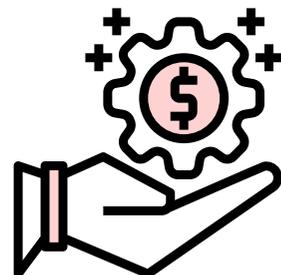
According to the Ministry of Information and Communications' 2019 summary and 2020 orientation report, total ICT industry revenue in 2019 is estimated at \$112,350B, including 81.5% for ICT export. Also, the Ministry of Information and Communications announced that software industry revenue reached \$5B, up \$500M compared to last year. Total ICT industry value for the State budget in 2019 is VND 54,000B, an increase of VND 2000B comparing to 2018. However, the digital industry's revenue only makes up a minor part in IT industry revenue (accounting for 0.76% of the IT industry's revenue). The telecommunications industry grew by nearly 19% with the contribution of 50,000 technology enterprises. The IT industry maintained its growth rate of 10%.

Regarding ambitious orientations that should be focused on in 2020, Minister of Information and Communications Nguyen Manh Hung said that the Year 2020 would be the year of national digital transformation, the year of a great start to move towards a digital Vietnam. This will be a profound and comprehensive transformation, which is first the transformation of methods, operating procedures, processes in all fields. All in all, this is an encouraging sign, helping Vietnam get closer to the goal of becoming an IT nation of the region.

TYPES OF IT SERVICES IN VIETNAM



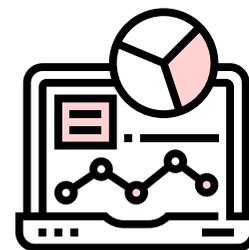
E-Commerce



Fintech



**Car/ food
order**



**Software
outsourcing**



**Digital content,
online media**



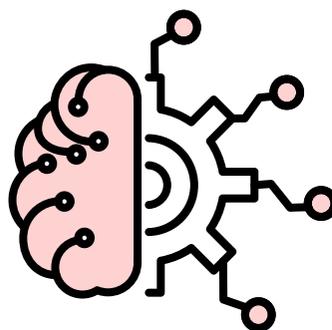
**Online
travelling**



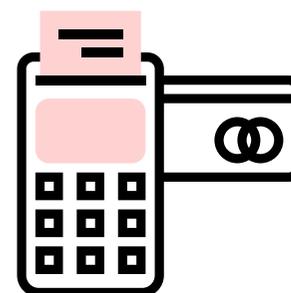
Transportation



**Business
Process Outsourcing
(BPO)**



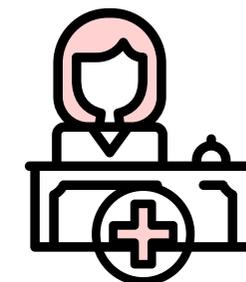
**High-tech
(AI/ML, IoT,
Blockchain...)**



**Business service
(SAAS,...)**



Edtech



Healthcare

According to a recent report on Southeast Asia Digital Economy in 2019, the region's digital economy is expected to exceed \$100 billion this year and this figure will have been triple by 2025. Southeast Asia is likely to become one of the fastest-growing markets for e-commerce thanks to its tech-savvy population, especially smartphone usage is increasingly on the rise. As stated by the TopDev survey, in 2020, Vietnam will concentrate on 12 key areas such as E-commerce, Fintech, Ride/food order, Edtech, Healthcare, etc.

IT ENGINEERS
400.000

IT STUDENTS
GRADUATE ANNUALLY
50.000
FROM 153 IT INSTITUTIONS

VIETNAM DEVELOPERS' RANKING

SKILLVALUE
29th
WORLDWIDE IN DEVELOPER SKILLS CHARTS OF SKILLVALUE'S REPORT 2018

TOPCODER
TOP 6
WORLDWIDE IN DEVELOPER SKILLS CHARTS OF TOPCODER REPORT 2016

HACKERRANK
23rd
WORLDWIDE IN DEVELOPER SKILLS CHARTS OF HACKERRANK'S REPORT 2016

THE FIRST TWO SCIENTIFIC RESEARCHES
ABOUT A.I
AT NEURIPS - TOP 1 CONFERENCE IN THE WORLD ABOUT ARTIFICIAL INTELLIGENCE IN CANADA FROM ARTIFICIAL INTELLIGENCE RESEARCH LAB VINAI RESEARCH

CAPACITY

VIETNAM
TOP 8

ON OCED'S PISA CHART 2018 ON 15-YEAR-OLD STUDENTS' ABILITIES ABOUT MATHS, SCIENCE AND READING COMPREHENSION VIETNAM RANKED ABOVE DEVELOPED ECONOMIES LIKE KOREA, CHINA, HONGKONG

PROJECT
150.000

VIETNAM PUPILS, STUDENTS CAN LEARN PROGRAMMING WITH NO TUITION FEE IN THE PROJECT "CODING FOR THE FUTURE WITH GOOGLE"

VIETNAM ENHANCES
S.T.E.M EDUCATION

SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS

ALGORITHM & PROGRAMMING LESSONS ARE TAUGHT FROM
GRADE 8

IN INFORMATICS OF NEW HIGH SCHOOL PROGRAM

THE WAVE OF STRONG TECHNOLOGY AND IT INVESTMENT

In the near future, Vietnam will be the destination for many large technology corporations in the world. Apple's supply chain Vice President Rory Sexton said Apple is ready to meet up and find opportunities for future cooperation with Vietnam ICT enterprises wishing to join Apple's supply chain. Beside Samsung - one of the foreign capital corporations that help accelerate Vietnam's economy, the participation of Apple in the future probably will continue to strengthen Vietnam's wave of foreign investment in 2020. Particularly in 2020, Samsung said they will invest an additional \$300 million in R&D in the Hanoi, and needs 4,000 more IT employees in the near future.

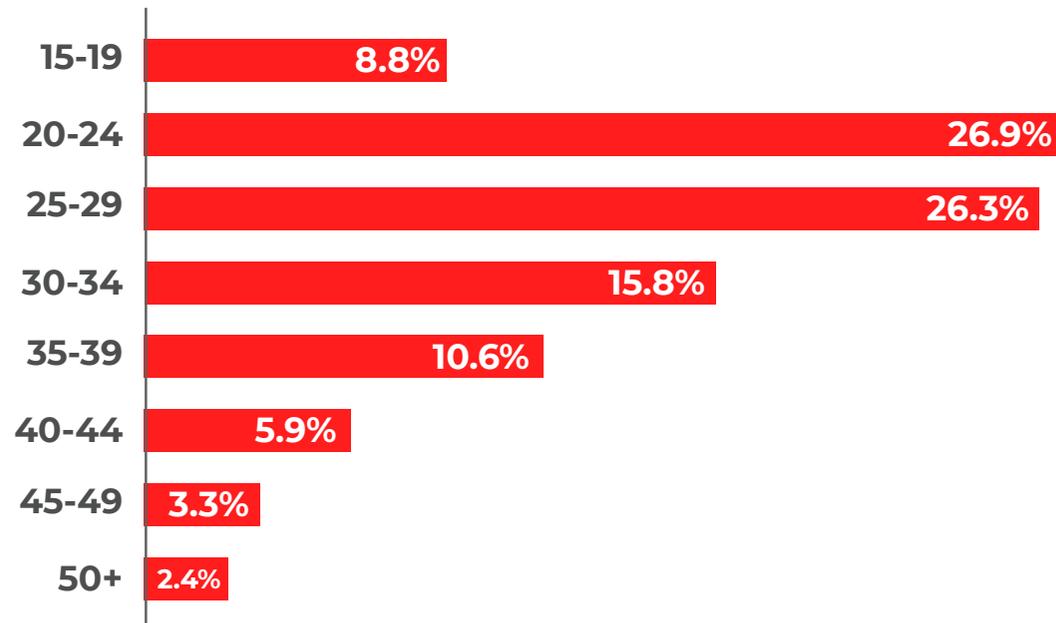
Hindustan Computers Limited (HCL), one of India's 3 largest IT companies (Top 5 World Outsourcing Companies), has built its center in Ho Chi Minh City, and needs an additional 10,000 engineers in the next 5 years. Axon Enterprise, one of the leading technology-developing companies for law enforcement solutions in the US has also built its technology development base in Ho Chi Minh City.

2 VIETNAM IT TALENT POOL

DEMOGRAPHIC

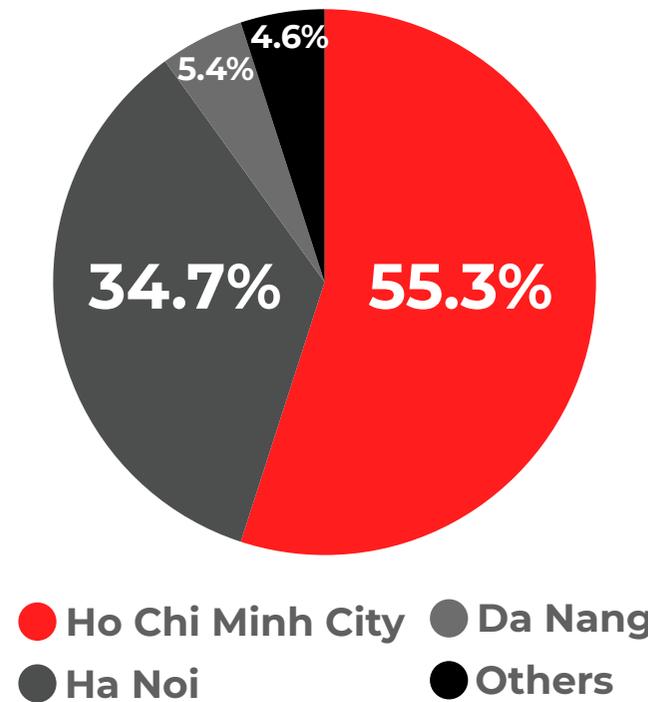
Nowadays, most of the developers belong to Millennials generation - employers need to pay attention to age, interests, insights to adjust their recruitment plan suit the current multi-generational recruitment trends nowadays,.. This is a generation that desires a better balance, a healthy lifestyle, more information about the company, its products and wants to be highly involved in the product development process. They also expect the product to have the ability to serve them and their community. Millennials with a fast-paced way of living require an active and flexible lifestyle. The recruiters also need to prepare for the Centennials (GenZ), following Millennials. GenZ' mindset and how to interact with them are becoming more different. They are projected as a new wave which would change service and entertainment industry context, recruitment and ICT are not exemptions, certainly.

AGE

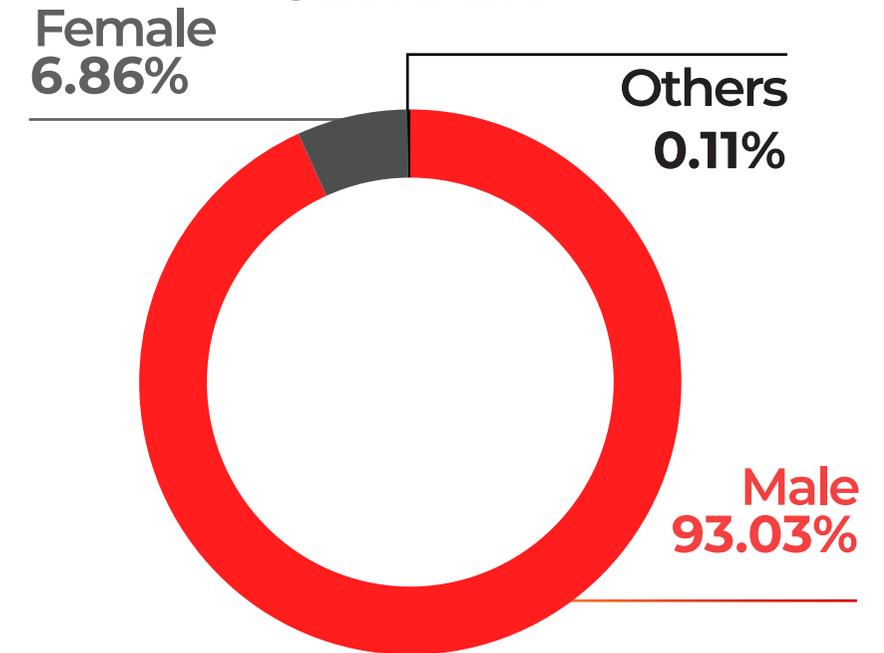


The age dominating this survey is from 20 to 34 years old. Numerous developers started coding early and about 8.8% of them started coding before 20. At present, the number of developers in Vietnam at a young age accounts for the majority with 53.2% aged 20 - 29 years old.

LOCATION



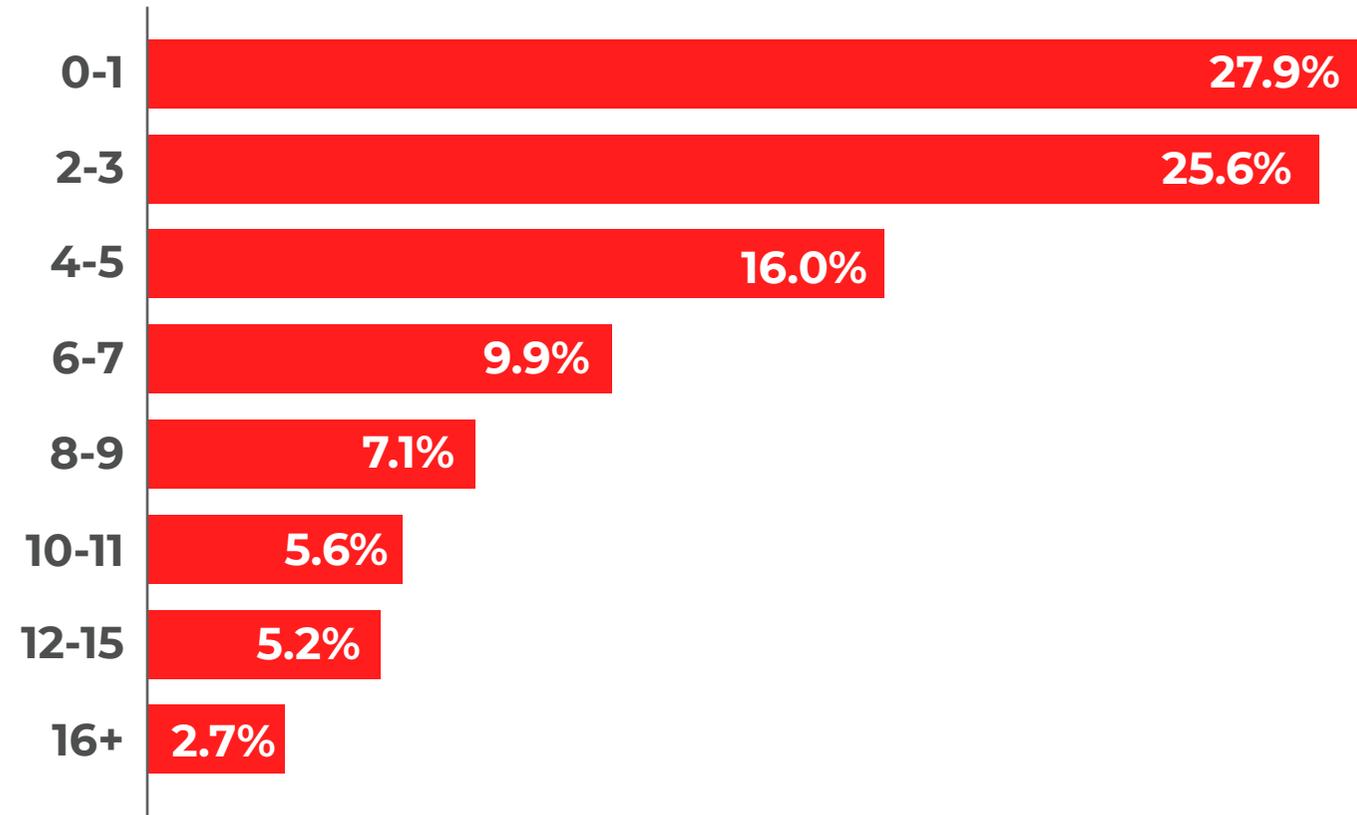
GENDER



More than 90% of the feedback we receive indicates that Male still dominates the gender of developers or people working in the technology sector. Females constitute a minor number of 6%, however, the proportion of women has also increased significantly, especially those having 2 years of experience or more. Also, comparing to last year, the number of females working in IT sector saw considerable growth.

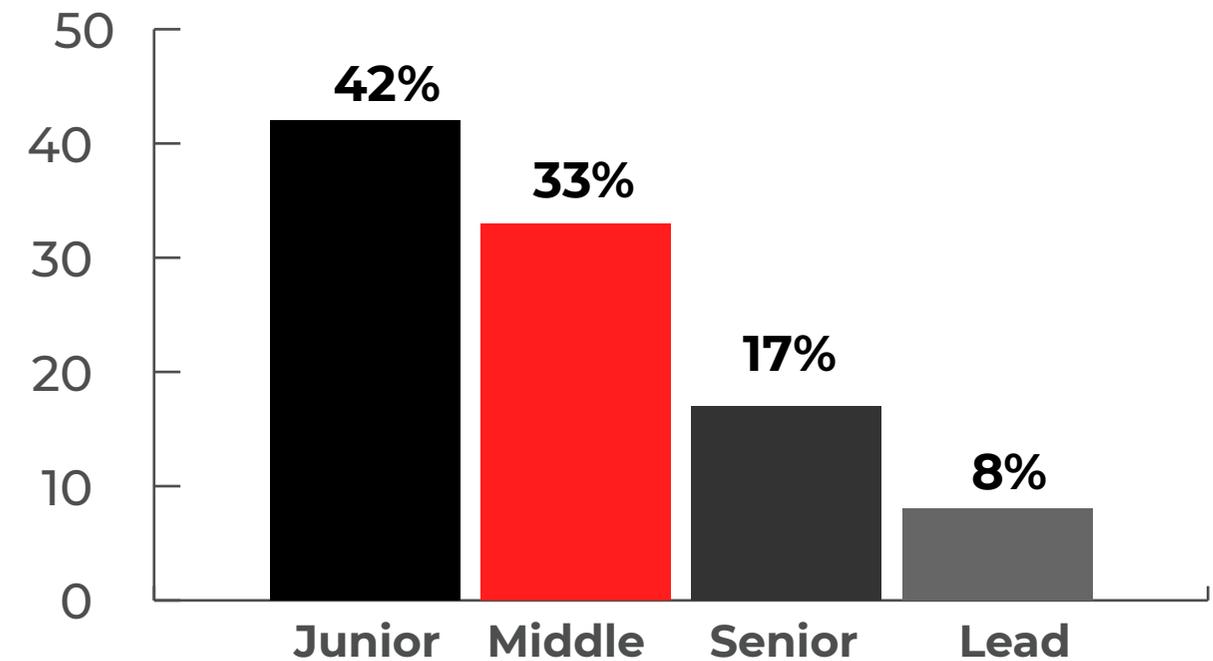
DEMOGRAPHIC

YEARS OF EXPERIENCE



The number of senior developers over 5 years of experience accounts for about 30% while those with less than 3 years of experience represents 53.5%.

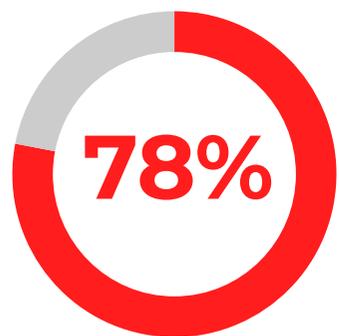
LEVEL OF QUALIFICATION



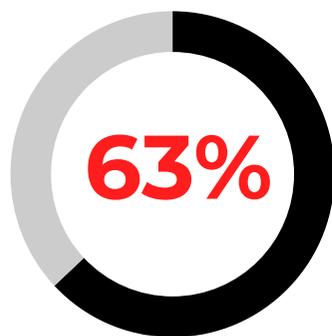
There is a large number of developers with only a few years of experience but having Senior / Lead expertise. In contrast, some having many years of experience but only being reviewed as Junior or Middle-higher positions.

DEMOGRAPHIC

WHY YOU CHOOSE PROGRAMMING?



Passion for technology, programming & computer



Attractive salary



Good logic & computer background



Prospective career development

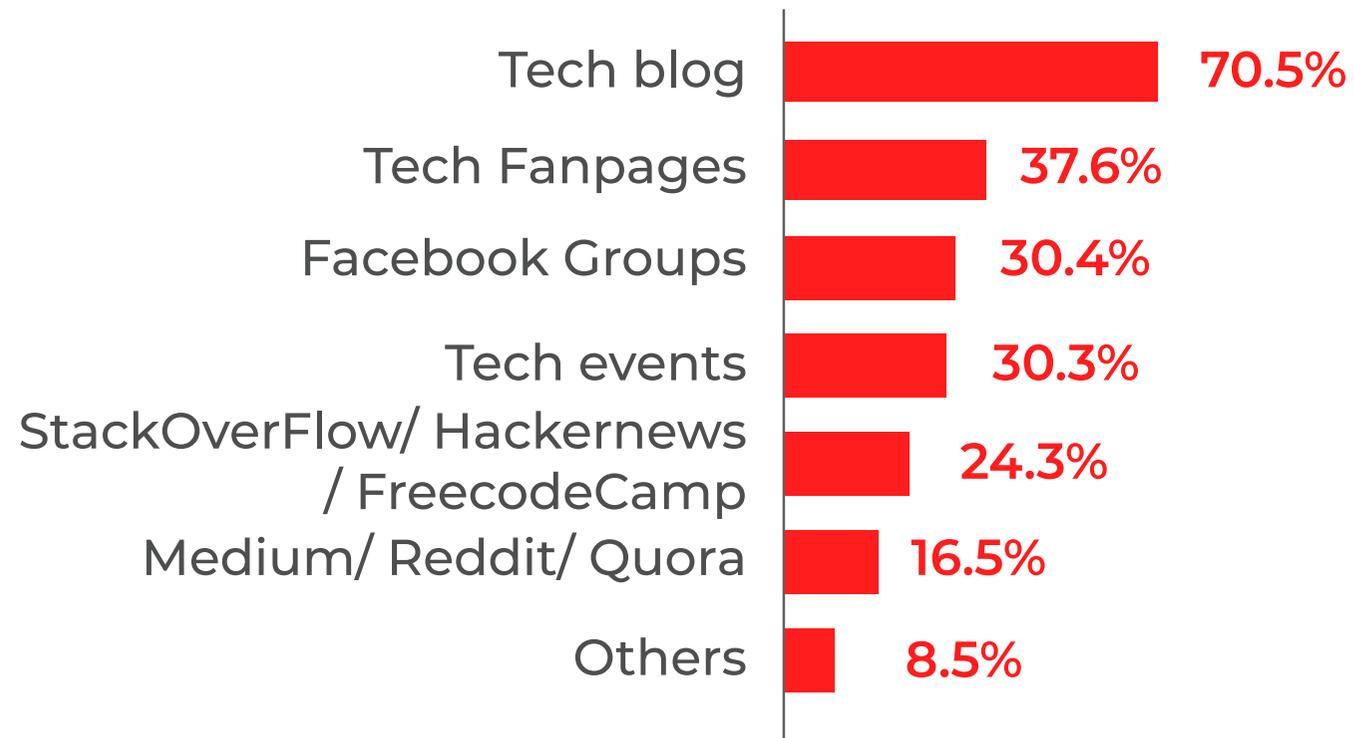
Most candidates choose to follow the programming industry because of their interest and passion for it. What makes them feel most satisfied is that they can be trained and have the opportunity to develop their skills. Career path and salary are also two key factors fulfilling candidates' satisfaction.

WHAT MAKES YOU FEEL MORE SATISFIED WITH YOUR JOB?

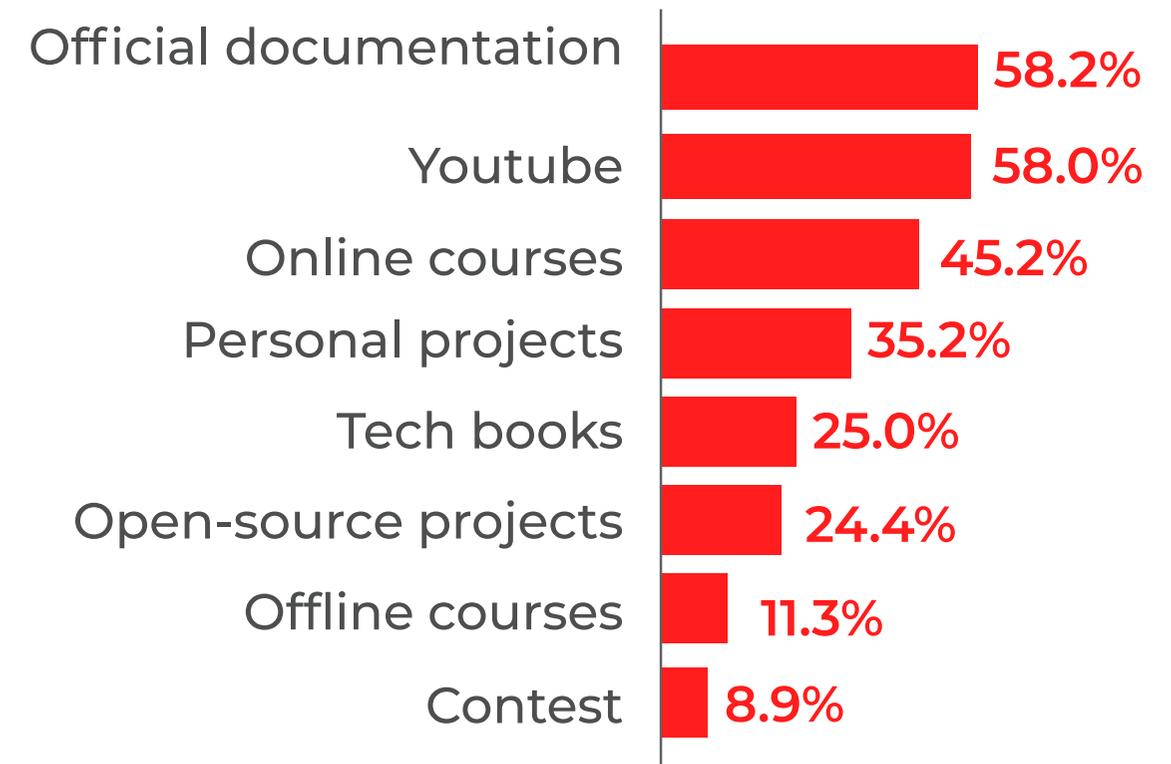


DEMOGRAPHIC

HOW DO YOU UPDATE YOUR TECH NEWS?



HOW DO YOU LEARN NEW PROGRAMMING LANGUAGES

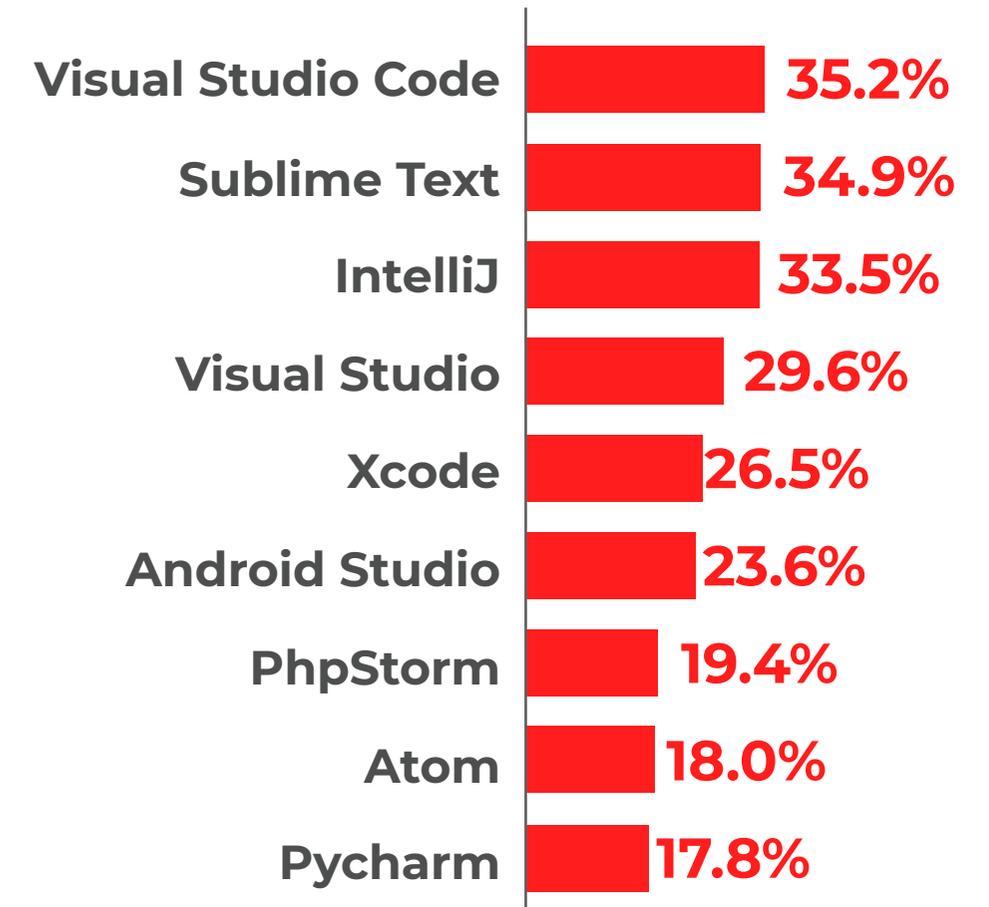
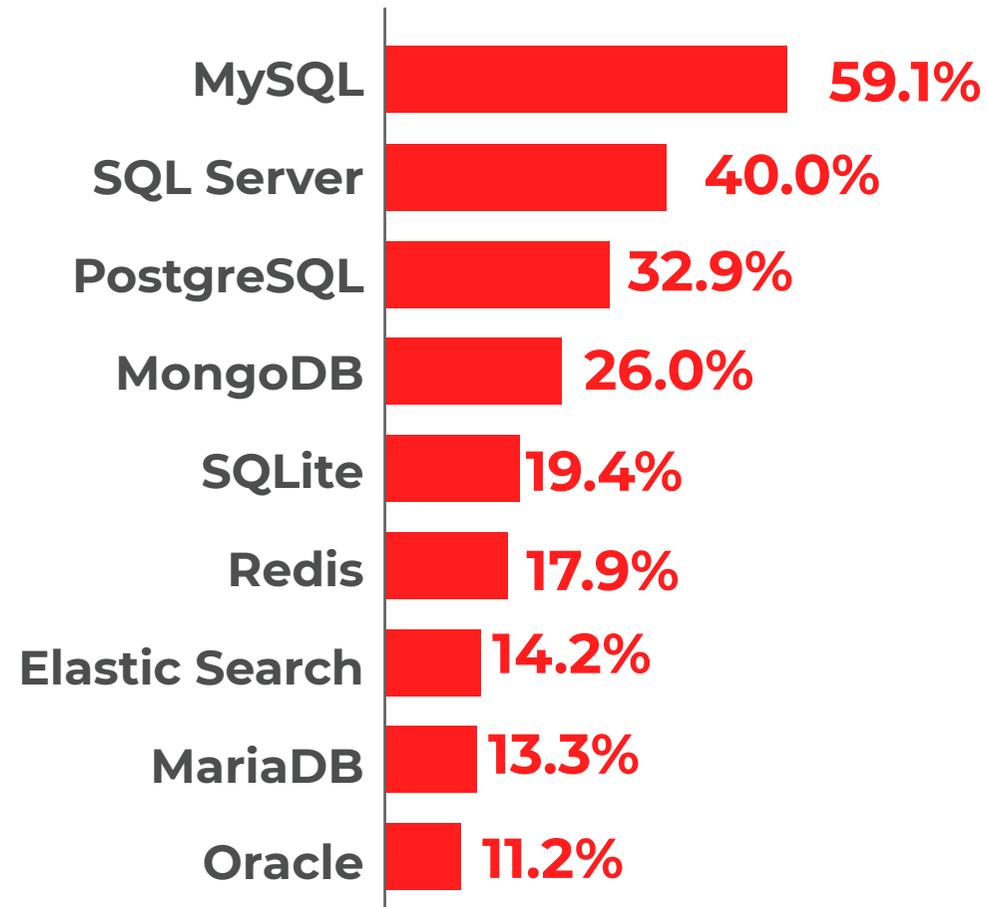
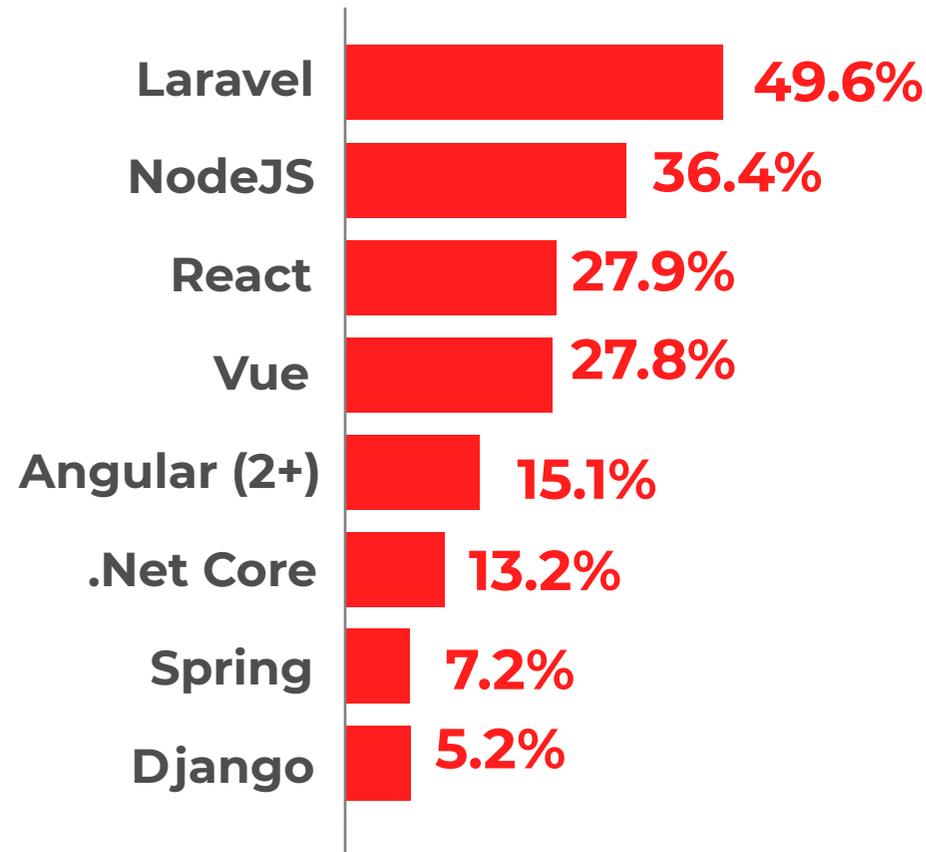


About 70.5% of developers said they mostly update their knowledge through blogs rather than other media channels. While international developers update information via Twitter, those in Vietnam will use programming technology fanpage as well as Facebook groups of tech experts instead. Official documentation is also a way for developers to self-update.

FRAMEWORKS / LIBRARY

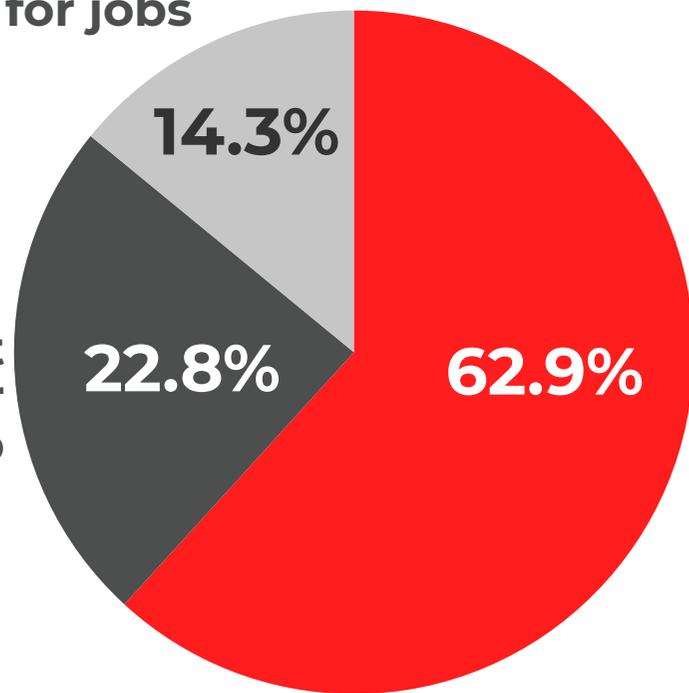
DATABASE

IDE & TEXT EDITOR



JOB-SEARCHING BEHAVIOR OF DEVELOPERS

I'm actively looking for jobs



I am not looking for any job

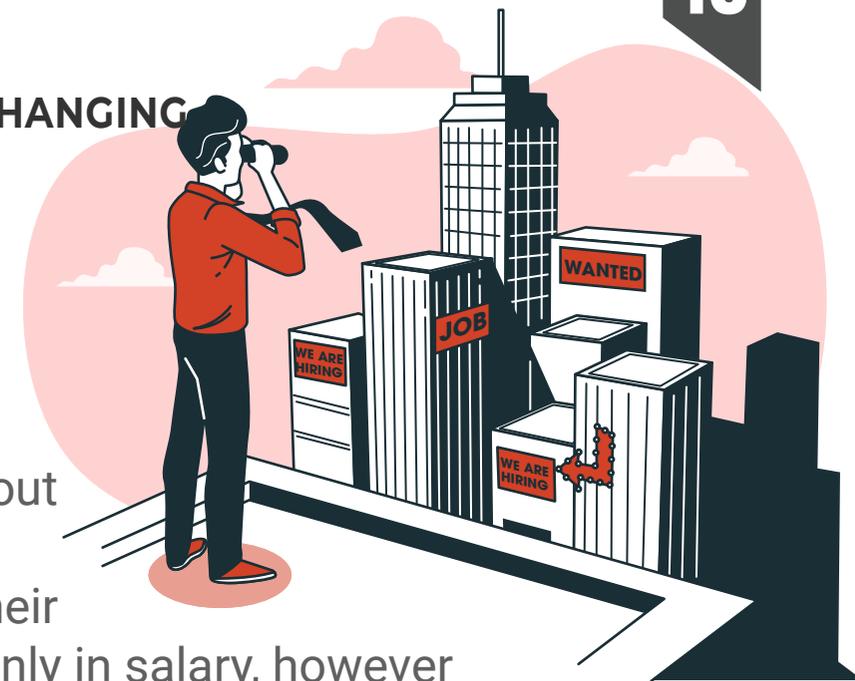
I am not looking for new jobs, but open for new opportunities

About ¾ developers are willing to switch their working environment whenever suitable.

AVERAGE DURATION FOR JOB-CHANGING

1,67 YEAR ~ 20 MONTHS

The reason behind is not just about inappropriate salary. 70% of IT personnel are ready to change their workplace with a 15% increase only in salary, however they gain more value as mentioned on page 10.



EMPLOYEE TURNOVER RATIO REACHES

24%

IN 2019. IT IS ONE OF THE 4 INDUSTRIES TO OWN THE HIGHEST RATE

While 68.2% want to get higher salary, 46.9% look for a better working environment and 34.2% for more challenging job.

68.2%
SEEKING HIGHER SALARY

46.9%
SEEKING BETTER WORKING ENVIRONMENT

34.2%
SEEKING MORE CHALLENGING JOB & RESPONSIBILITY

400.000 IT ENGINEERS

Vietnam ranked 42nd among 129 global economies on the Global Innovation Index 2019 (GII) published by the World Intellectual Property Organization (WIPO) in New Delhi, India on Wednesday, comparing to 45th position last year. In the past 9 months of 2019, Vietnam has attracted \$26,16B FDI which brought Vietnam to the 8th position among 20 best countries to invest in according to US News & World Report on new transformations in Vietnam. Vietnam also ranked 48th among 157 countries in terms of Human Capital Index (HCI), only following Singapore in ASEAN region.

Currently, Vietnam human resource market is extremely in high demand for high-quality personnel, however, it is inevitable that supply is always lower than demand. The only key to solve this headache problem lies in training. Currently, training institutions in Vietnam has not yet met businesses' personnel demand. Only 30% of the 50,000 IT students meet the enterprises' needs.

In the coming time, perhaps IT training centers and institutions need to shift their attention to quality rather than quantity. At present, the government also plans to invest more in 20 schools currently teaching IT in Vietnam. From there, the government will cooperate with businesses to open more short-term training courses for young people so that they can approach real-life requirements and catch up with new technologies. In fact, many companies now have an internship program which plays as the best opportunity for students to practice. Part-time jobs also help them a lot in accumulating experience, processes and problem-solving methods in future work. Besides, foreign languages as well as social interaction skills should become the focal point when training instead of only concentrating on IT skills and knowledge.

On the other hand, in the era of multi-generational recruitment, businesses also face challenges in retaining employees and recruiting newbies, partly because the working culture of new generation has changed. Businesses should focus more on creating work-life balance, making the working environment more active, thus helping candidates easily get on well with others. As a result, together contributing ideas and developing the company's products are absolutely evident. Currently, lots of large enterprises are applying startup model in their company to help motivate employees, making them show more dedication to work.

SALARY OF **3** DEVELOPERS IN VIETNAM

SALARY

AVERAGE SALARY LEVEL FOR DEVELOPERS IN VIETNAM

Based on salary information provided by IT candidates along with data from job postings throughout the market, we have analyzed and defined skills, Tech stack & position which receive the highest salaries in the specific market of Vietnam. The market-average data is presented as below:

\$1,329

The average salary that experienced developers get paid

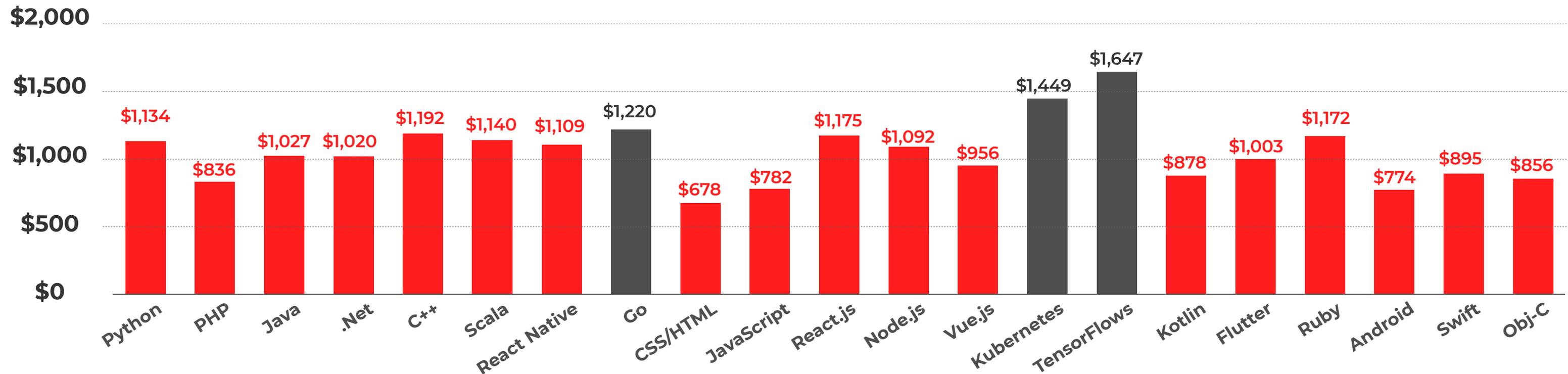
12%-18%

Average salary raise after 01 working year

1-MONTH SALARY

Tet 2020 average bonus for developers (management positions are not included)

AVERAGE SALARY FOR TECHNOLOGY PLATFORMS (FOR POSITIONS FROM 1,5 TO 3 YEARS OF EXPERIENCE)



Top highest-salary positions in the chart require important and special skills such as ML/AI, DevOps, Data Analyst, etc. while there was a considerable decrease in Mobile skills compared to the beginning of 2010 when there was a strong development of Mobile trend with "mobile first" wave prevailed the market. The current trend still focuses on web systems and high-tech, deep tech components that lead to mobile "disappearance of dominance", instead, a strong growth of languages and framework web

SALARY

YEARS OF EXPERIENCE



\$338 - \$520

FRESHER

(Under 2 years)



\$525 - \$1,161

EXPERIENCED

(2-4 years)

MANAGEMENT ORIENTATION



\$1,355 - \$2,160
MANAGEMENT LEVEL

(From 5 years)



FROM \$2,150
DIRECTOR OR HIGHER

(From 10 years)

TECHNICAL ORIENTATION



\$1,550 - \$2,355
MANAGEMENT LEVEL

(From 5 years)



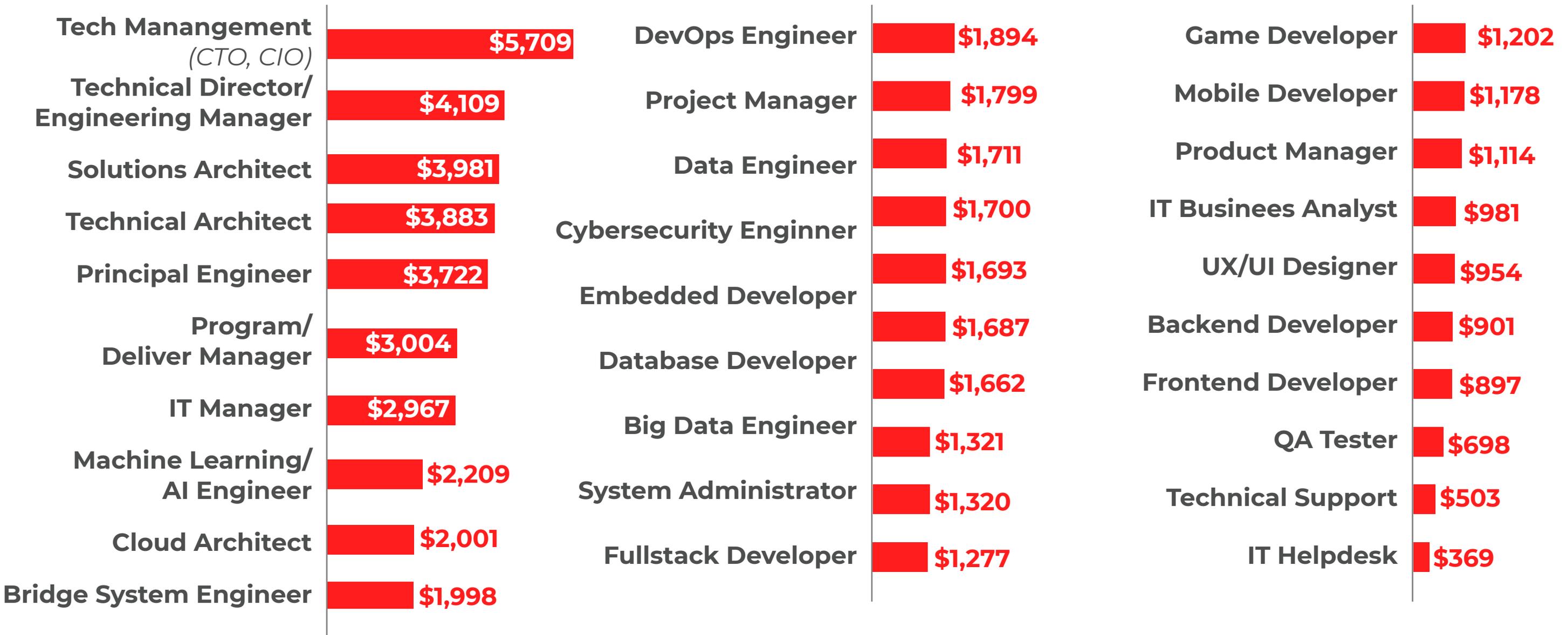
FROM \$2,550
DIRECTOR OR HIGHER

(From 10 years)

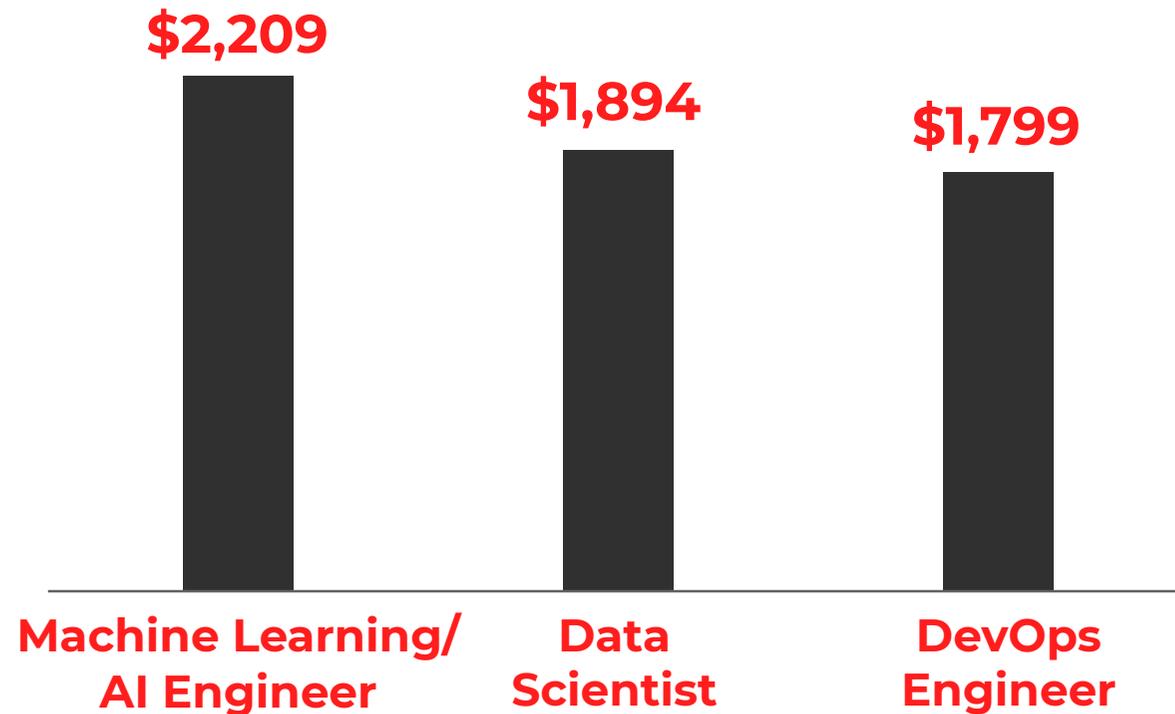
After 1 working year, developers' salary usually increase significantly.

Employers also face many difficulties when recruiting management or higher positions due to strict demands about compensation and other job requirements to ensure their work-life balance - also Millennials new motto.

SALARY LEVELS BASED ON POSITIONS



THE MOST PROSPECTIVE POSITIONS IN THE MARKET (HIGH DEMAND AND SALARY)



At the moment, Machine Learning / AI Engineer still top the list after 3 years lying in the most promising positions. Data Scientist and DevOps Engineer are also the two most “hunting” positions.

THE MOST ATTRACTIVE TET 2020 BONUS IN THE MARKET

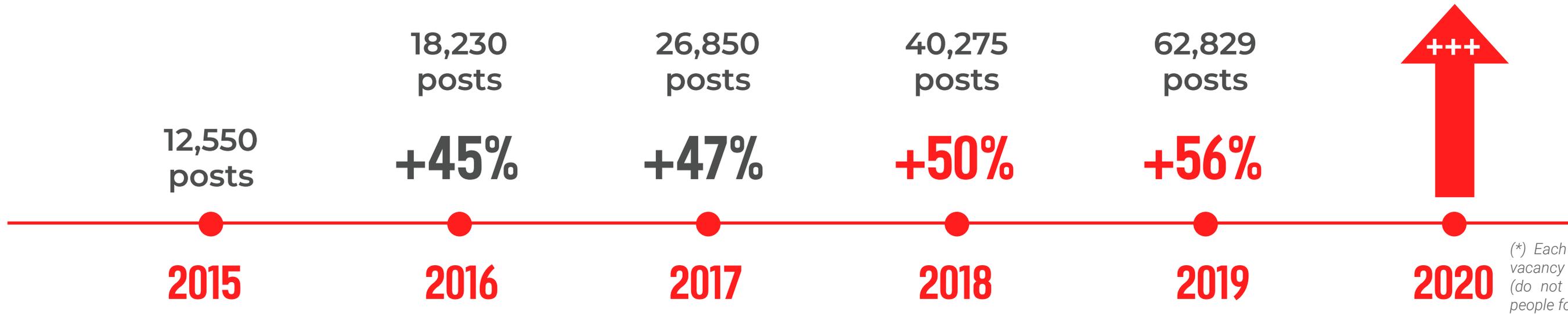
- 1 6-month salary
- 2 Month 14th salary (equivalent to 2-months salary)
- 3 13th Month salary + Signing bonus
- 4 Christmas bonus+ New Year bonus + Lunar New Year bonus
- 5 13th Month bonus + Productivity bonus

Only 49.5% of developers are satisfied with this bonus, in this 49.5% figure, <10% feel absolutely satisfied, the rest found this acceptable. More than 50% feel this is unworthy with the job and the sector they are pursuing. Some (~ 3.5%) said their company didn't apply any bonus policy for Tet holiday.



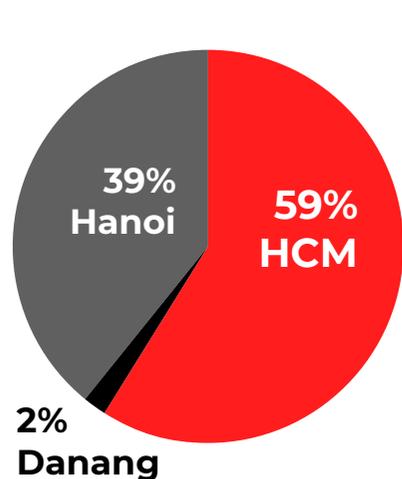
4 IT PERSONNEL SUPPLY-DEMAND

IT HUMAN RESOURCE



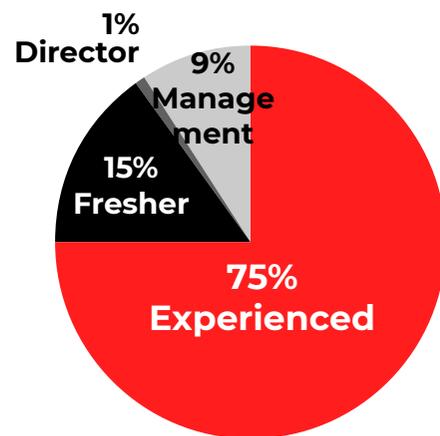
(* Each post corresponds to a vacancy on recruitment channels (do not specify the number of people for each position)

Demand for IT personnel will continue to increase substantially in 2020. Top reasons leading to “hot” growth in IT personnel are: Vietnam has attracted the attention of big technology companies in the world to hire and build their product development team; and Make In Vietnam wave of innovative startups in the field of technology is getting stronger.



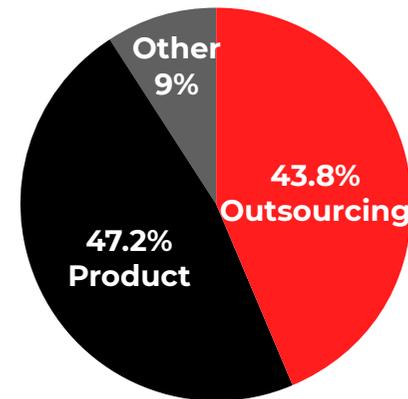
BASED ON GEOGRAPHY

Financial centers, dense population, a high number of large enterprises build branches in Ho Chi Minh City.



BASED ON EXPERIENCE

With a shortage of personnel nowadays, lots of companies shift their policies into recruiting freshers, give them re-training so they can gain abundant supply later.

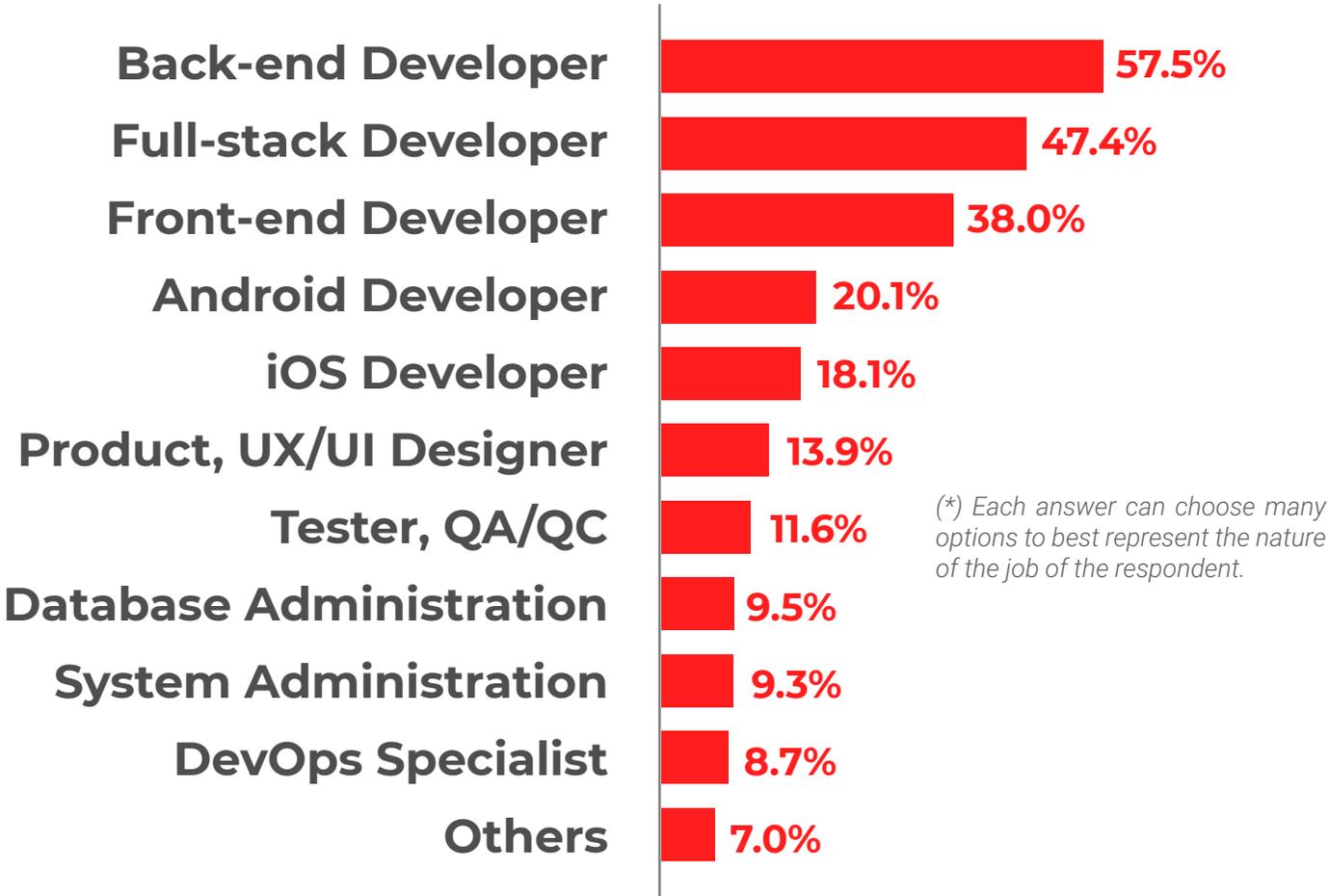


BASED ON COMPANY'S TYPE

With “Make in Vietnam” trend, more and more startups making prestigious products show their appearance in Vietnam.

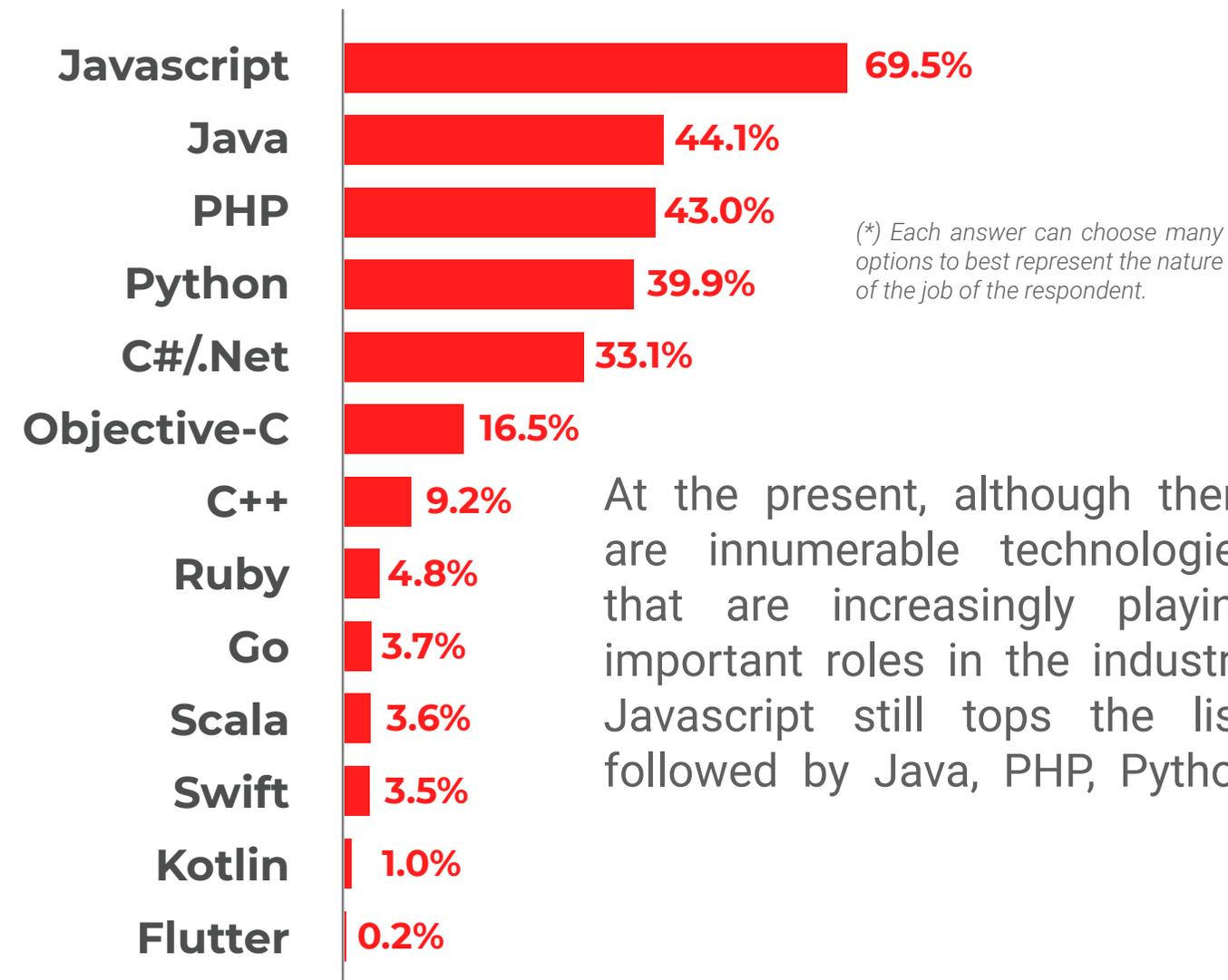
IT HUMAN RESOURCE

THE MOST POLULAR PROGRAMMING JOBS?



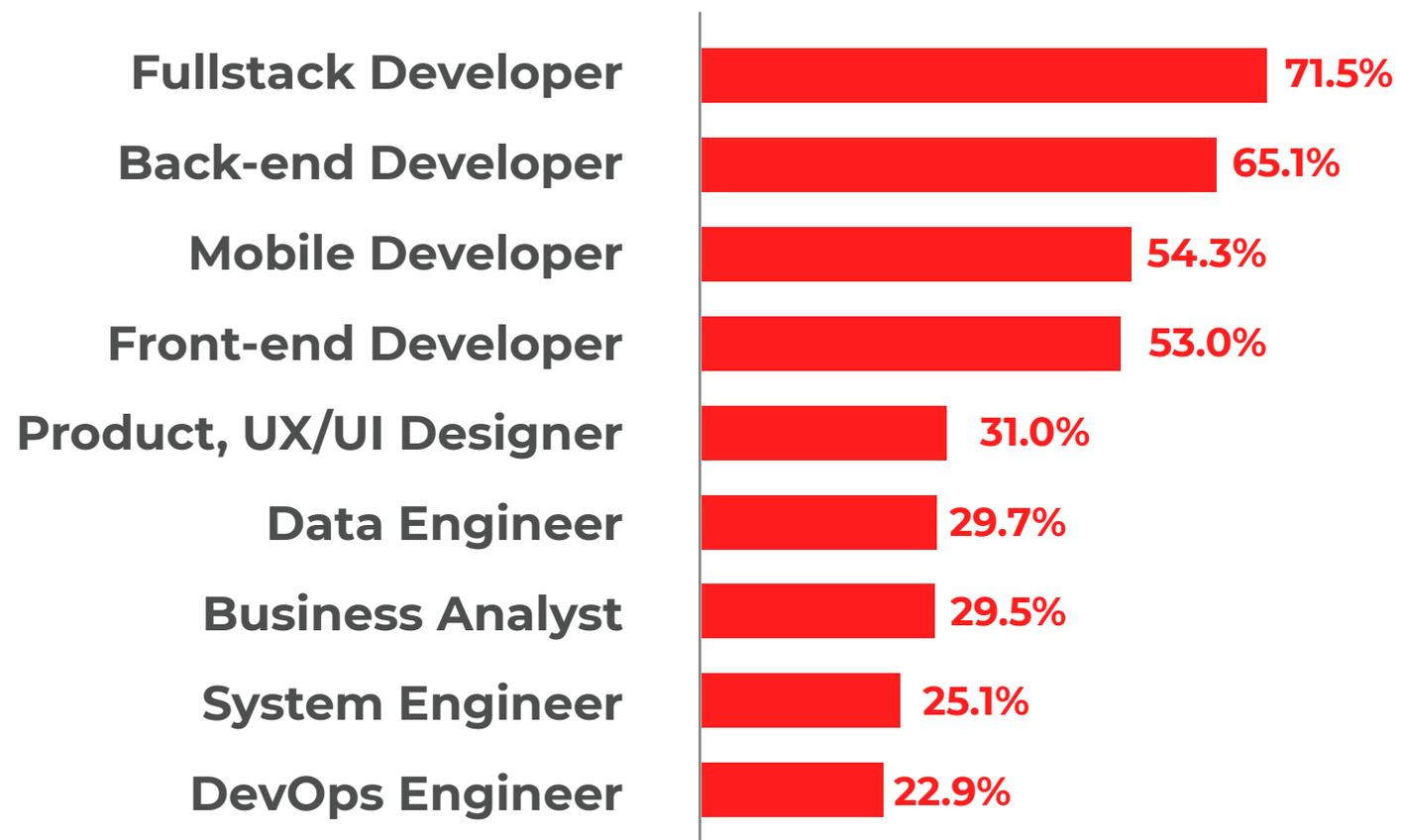
60% are Back-end developers, Full-stack Developers ranked 2nd with 47.4%. The dominance of trends and web technologies has pushed the number of Web Developers much higher.

THE MOST POPULAR TECH STACK?

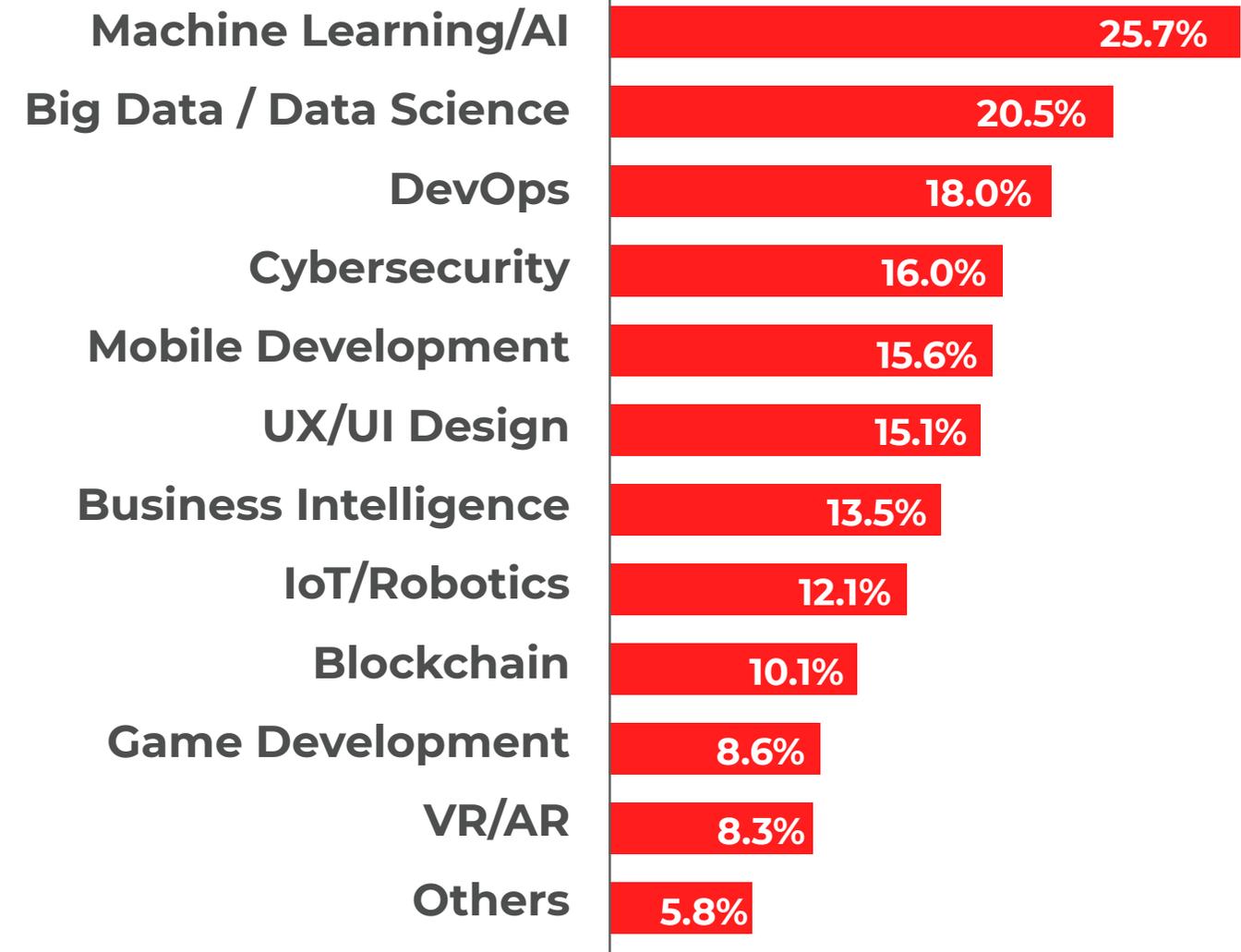


At the present, although there are innumerable technologies that are increasingly playing important roles in the industry, Javascript still tops the list, followed by Java, PHP, Python

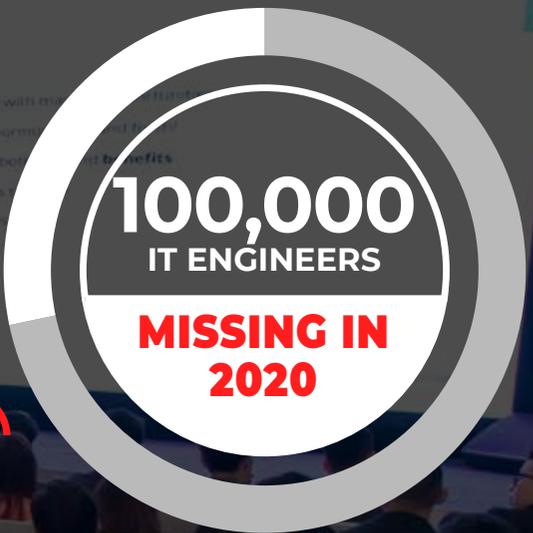
THE MOST ON-DEMAND PROGRAMMING POSITIONS?



THE MOST EXPECTED SKILLS?



IT HUMAN RESOURCE



According to the latest IT market report, Vietnam needs an additional 400,000 IT personnel in 2020, and 500,000 for 2021.

Despite being highly evaluated, Vietnam IT personnel has not been exploited enough both in term of **QUANTITY** and **QUALITY** for the purpose of serving domestic technology-developing demand and achieving equality between other nations in the region.

REASON BEHIND VIETNAM IT PERSONNEL SHORTAGE

- The training program's focus does not meet businesses' needs
- Graduates have neither practical skills nor soft skills (teamwork, time management, communication, ...)
- IT personnel lack communication skills and fluency in English.
- Technology changes too fast for schools to develop proper training programs

SOLUTIONS



TRAINING FROM IT SCHOOLS & INSTITUTIONS

- + Coordinate with experts from businesses for appropriate skills and knowledge training
- + Update curriculum regularly and give students opportunities to participate in events/workshops
- + Enhance logic-algorithm platform & English training courses



TRAINING FROM BUSINESSES & EXPAND THE TALENT POOL

- + Build **on-job training** in the company
- + Expand talent pool by giving opportunities to fresh graduates (Freshers) combined with the Nurturing Talents model in a bid to create strong bedrock for sustainable IT personnel development for businesses & Vietnam.

SOURCE & REPORT'S FOUNDATION

PART 1

- (1) Press release: Results of the Population and Housing Census 2019 (December 19, 2019) by the Vietnam General Statistics Office
- (2) Press release: Socio-Economic situation in Quarter IV and 2019 (December 27, 2019) by the Vietnam General Statistics Office
- (3) The World Bank | Vietnam Data <https://data.worldbank.org/country/vietnam> (2018)
- (4) Vietnam Socio-Economic Overview 2018 (December 28, 2018) by the Vietnam General Statistics Office
- (5) 2019 summary and 2020 orientation report by the Ministry of Information and Communications | December 28, 2019
- (6) 2018 White Paper on Information and Technology of Ministry of Information and Communications
- (7) Ministry of Planning and Investment

PART 2,3,4

75.561

IT candidates

1.342

IT employers

180.000+ analyzed job data

Vietnam has attracted the attention from regional technology companies to hire or build their product development team in Vietnam, the wave of innovative startups in the technology sector is getting stronger and stronger, especially after huge investments in tech startups. There is also a transformation of traditional businesses (Digital Transformation - DX) such as tourism, agriculture, real estate ... who all strive to join in DX and e-commerce. This has led to a mounting IT personnel demand on a large scale in the near future. At the recent Vietnam ICT Summit 2019, the Minister of Information and Communications Nguyen Manh Hung said that Vietnam needs an additional 50,000 IT enterprises (ICT) to accelerate its digital transformation.

Information sources

From June 1, 2019 - December 14, 2019, we had conducted a survey from thousands of customers, partners, candidates and employers in IT industry. Besides, TopDev's recruitment data in the past 4 years contributed substantially to this report's objectivity and accuracy.

TOPDev

TOP IT RECRUITMENT PLATFORM IN VIETNAM

topdev.vn

Accelerate your IT careers

IT
Jobs

IT
Education

IT
Community

- Top IT recruitment platform in Vietnam with more than 300,000 Developer Profiles
- The pioneering and one-of-a-kind unit in the IT sector in Vietnam helps building and developing Recruitment Brand – Employer Brand for hundreds of local & international companies
- The prestigious unit specializes in conducting surveys, analyzing and releasing quarterly/annual reports about IT market and IT human resources in Vietnam
- The Organizers of the 2 largest scale technology events in Vietnam: Vietnam Mobile Day and Vietnam Web Summit

TopDev is also owning the largest developers community in Vietnam with **more than 382.400 Followers.**

382.400

IT Followers

300.000

Developer Profiles

1.800.052

Social Engagement per month

4.735.926

Online Reach per month



VIET NAM IT NATION

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