kaspersky



Inside the dark web job market

Their talent, our threat

Executive summary

This report examines how employment and recruitment function on the dark web, drawing on thousands of job-related posts collected from shadow forums between January 2023 and June 2025. Our analysis shows that the dark web continues to serve as a parallel labor market with its own norms, recruitment practices and salary expectations, while also reflecting broader global economic shifts. Notably, job seekers increasingly describe prior work experience within the shadow economy, suggesting that for many, this environment is familiar and long-standing.

The majority of job seekers do not specify a professional field, with 69% expressing willingness to take any available work. At the same time, a wide range of roles are represented, particularly in IT. Developers, penetration testers and money launderers remain the most in-demand specialists, with reverse engineers commanding the highest average salaries. We also observe a significant presence of teenagers in the market, many seeking small, fast earnings and often already familiar with fraudulent schemes.

While the shadow market contrasts with legal employment in areas such as contract formality and hiring speed, there are clear parallels between the two. Both markets increasingly prioritize practical skills over formal education, conduct background checks and show synchronized fluctuations in supply and demand.

Looking ahead, we expect the average age and qualifications of dark web job seekers to rise, driven in part by global layoffs. Ultimately, the dark web job market is not isolated — it evolves alongside the legitimate labor market, influenced by the same global economic forces.

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Introduction

In 2022, we published our <u>research</u> examining how IT specialists look for work on the dark web. Since then, the job market has shifted, along with the expectations and requirements placed on professionals. However, recruitment and headhunting on the dark web remain active.

So, what does this job market look like today?

In this report, we present an updated analysis of the dark web job market as of 2025. We outline the key developments observed over the past three years and highlight emerging trends that may shape its future trajectory. We examine how employment is structured, who is seeking work, and the types of roles and skills that are currently in demand. We also compare the dark web job market with the legal employment market to identify shared patterns and fundamental differences. Certain sections of this report were developed with the support of Kaspersky HR specialists, enabling us to provide a more comprehensive comparison of recruitment practices across both markets.

Our analysis is based on 2,225 job-related posts — vacancies and resumes — collected from dark web forums between January 2023 and June 2025. Some of the forums and resources reviewed may no longer be accessible at the time of publication.



Kaspersky <u>Digital Footprint Intelligence</u> collects posts from multiple dark web forums every day and stores them in a knowledge base for retrospective security analysis on behalf of our customers. Forums may close for various reasons, and individual posts may be deleted by authors or moderators due to loss of relevance or rule violations. Nevertheless, we retain access to this data for further analysis.

I. Key outcomes

Jobs on the dark web

69% of job seekers did not specify a preferred field, indicating that most are seeking any paid job opportunities Permanent employment was offered in 35% of observed vacancies

Female users

Jobs sought by users

The most frequently mentioned professions in the resumes of female job seekers:

- Chat or call-center roles 10%
- Technical support − 7%

Male users

The most frequently mentioned professions in the resumes of male job seekers:

- Developer 5%
- Money laundering 4%

Age distribution of dark web job seekers

- 24 years old average age
- 42 years old oldest job seeker
- 12 years old youngest job seeker

How people enter the dark web job market For most job seekers, work on the dark web is familiar. Many begin illegal work in their teens

Top 5 IT specializations

on the dark web by vacancy share

- Developers 45%
- Penetration testers 32%
- Designers − 6%

- Reverse engineers 4%
- Analysts 4%

Highest-paid IT specializations on the dark web

Reverse engineers earn the highest average salary, \$5,000 a month¹

Differences

Shadow and legal job markets

Legal employment offers several advantages over employment in the dark web job market, including:

- Employment relations regulated by law
- Stable and transparent salaries

Similarities

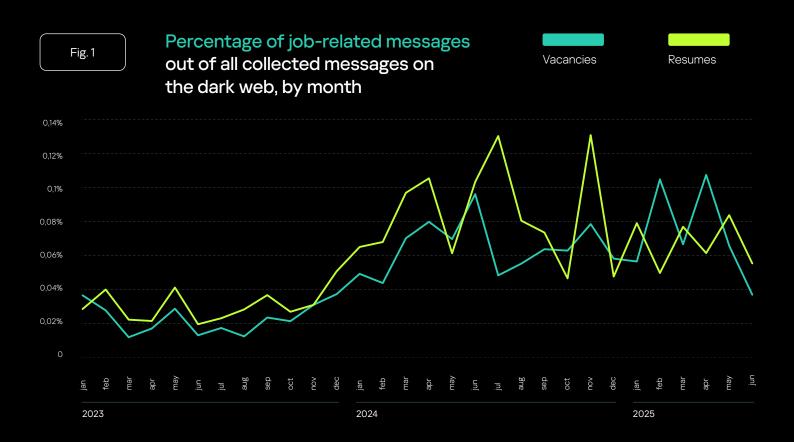
We identified the following trends in both job markets:

- Trends in the number of resumes and vacancies coincide, although they reach the dark web with a slight delay
- A skill-based approach to candidate selection
- Background checks on candidates

All salary references were converted into US dollars: At the time of writing, 1 Russian ruble = 0.0125 USD, 1 Euro = 1.5 USD.

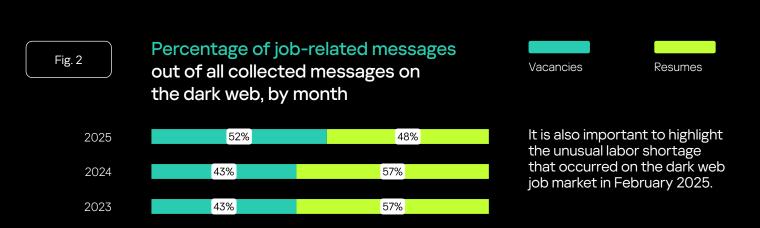
II. General statistics

For this research, 2,225 posts, including job vacancies and resumes, were collected from dark web forums over the past three years. We have carefully analyzed these publications and compiled statistics based on the data presented by the authors.



At the end of 2023, there was a notable increase in work-related posts published on dark web forums, most likely linked to waves of layoffs globally in 2023 and 2024. The <u>layoffs</u> had a noticeable impact on the IT sector.

Over the three-year period, job search posts slightly outnumbered recruitment posts: 55% of resumes compared to 45% for vacancies. This imbalance was particularly noticeable at the end of 2023, when the number of resumes began to rise.



III. Seeking 'anything that pays': Job demand on the dark web

In most cases, job seekers turn to the dark web in search of any job opportunities — 69% of candidates indicated that the specific line of work was not important. However, some job seekers narrowed their preferences by specifying the nature of the work they were willing to pursue: legal ('white'), illegal ('black') or semi-legal ('grey'). Overall, 28.4% of job seekers specified the types of jobs they were open to in their posts.

Preferred job types in job seekers' posts,



In contrast to 'white' work, which involves lawful employment and tasks that comply with legal regulations, 'black' work is frequently linked to illegal activities and can, in some cases, be considered criminal.

'Grey' work refers to activities that are not explicitly illegal but may involve ethical or legal concerns. For instance, employment in this category may involve tax evasion. In 5.6% of posts, job seekers explicitly stated their openness to accepting any type of work. A total of 8.9% were willing to accept illegal employment, while 0.4% were seeking solely illegal employment. More applicants indicated openness to 'grey' work: 18.3% indicated this in their posts, and 1.1% specified that they were only willing to work semi-legally.

However, the most frequently mentioned type of job was legal: 24% of job seekers expressed interest in legal work, and 9.7% specified that they would only consider 'white' work. These posts were published by various specialists such as designers, programmers, and even money mules, highlighting their openness to legal projects.

^{*} All publications in this research have been translated into English. Text in the postings and advertisements reproduced in this report, which were originally written in English, is unchanged from the original.



Money mules or drops

Individuals engaged in fraudulent activities, often involving bank accounts. Globally, the scope of their activities is more extensive. In addition to laundering and stealing money, some also carry out simple manual or physical work, such as putting up posters or receiving parcels on behalf of others.



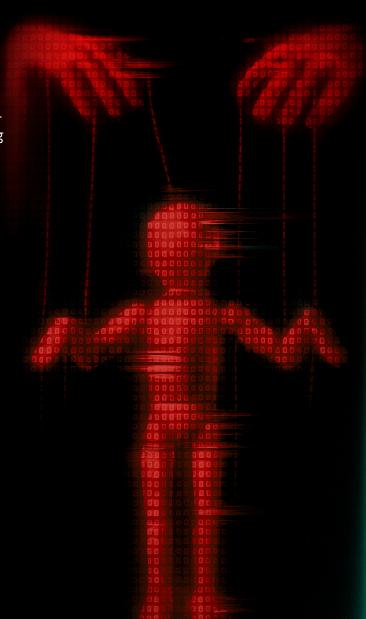
Mule handlers

The coordinators who assign tasks to drop are known as mule handlers.



Supports

In addition to the mule handler, members of fraudulent groups also interact with 'supports'. These individuals are well-versed in psychology and social engineering, enabling them to influence money mules who may question the legitimacy or legality of their actions.



• Username / zntge32 22.12.2023

Looking for someone to work with

Hello, I have bank account drops available and I have a merchant account also, looking for someone who can card my merchant accounts that are ready to be utilized for drops. Seeking someone proficient in operating loaders. Contact me on and we see how it goes.

IV. Who works in the shadows? Profiles of job seekers on the dark web

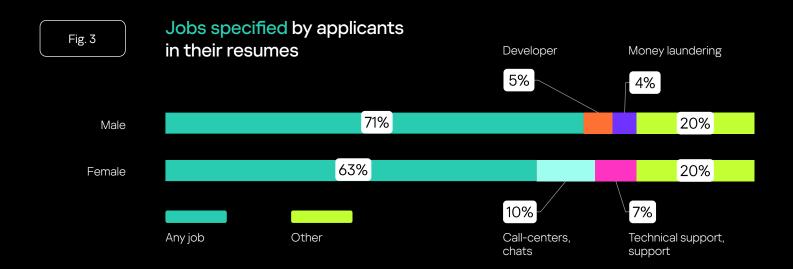
Distribution of resumes by job seeker's gender

Male
Female

As in the regular job market, job seekers on the dark web provide detailed lists of their skills and abilities. These may include language proficiency and absence of bad habits (for example, non-smoker, etc.).

Some also disclose personal information, such as age or gender. Of the 1,445 resumes collected, information about gender or age was specified in 801 (55%) of them. In some cases, vacancies also included gender-specific requirements for candidates: during the analyzed period, three were addressed to male applicants and five to female applicants.

Most job seekers consider any job offers: 70% of female and 71% of male applicants did not specify a particular job profile. We identified the most frequently mentioned specialties among male and female applicants and noted several differences.



Female applicants were more likely to seek roles that involve interaction with other people. 17% of resumes were for such positions, including support, call center and technical support positions.

Male applicants, when specifying their profession, more often mentioned work as developers (5% of resumes), or work related to money laundering such as money mules or mule handlers, in 4% of resumes.

On certain dark web forums, job seekers are required to state their age when posting a specialized application form. However, some applicants choose to disclose their age voluntarily, in order to emphasize their maturity.

Some forums that use application forms in job search threads are accessible from the indexed internet and can be accessed without registration or invitation. Application forms on these forums are also used by applicants under the age of 18 (based on the information they provide in their posts). We analyzed the resumes published by job seekers in this age group.



Job seekers under the age of 18 were more often interested in any job — a preferred job profile was not specified in 91% of resumes. Applicants in this age group generally wish to earn small amounts of money. The desired salary ranged from 1.5 USD to 100 USD at a time, or from 2.5 USD to 25 USD per day.

Quick work on the Internet has become a desirable type of work, especially among teenagers. Typically, job seekers in this age group are studying, making them unable to commit to a full-time position. However, if the job seeker has a smartphone with stable Internet access, they can perform small tasks, such as writing reviews, alongside their studies.

Username / Driz1zf
 Looking for work
 Age: 15
 Preferred job: Anything, don't care
 Time I am willing to devote: as much as needed
 My skills: spam, scam, traffic
 I want to earn: from 6 USD per day
 An example of a post from a darknet forum

It is important to note that fraudulent activities, such as scams, are common among both mature job seekers and those under the age of 18 due to the low entry threshold. The authors of such advertisements often try to persuade job seekers that their offers, including scams, carding and money muling, are the easiest way to earn money.

In total, 3% of job applicants under the age of 18 were specifically seeking jobs related to fraud, for instance, in computer games or classified advertisement services. It is notable that 6% of resumes published by job seekers under the age of 18 mentioned prior experience with scams.

In addition, individuals under the age of 18 mention their skills in their application forms. These may include stress tolerance, computer skills, programming ability or language proficiency at a certain level. For instance, 4% of job seekers in this age group highlighted their English proficiency at level B1 or above.

V. What roles and skills are in demand?

We analyzed job vacancies published on the dark web and identified the most frequently mentioned specializations.



Despite the implementation of various anti-carding measures in the infrastructure of banks and online retailers, carders continue to develop new methods for financial theft and build teams to carry them out.

Cryptocurrency has gained significant popularity in recent years. However, despite growing interest in the field, related vacancies remain limited, with only 0.8% of all observed publications related to cryptocurrency.

² Including mules, mule handlers, etc.

Including cybercriminals, such as groups specializing in credential theft, as well as specialists attracting traffic to a certain platform or service.

VI. Shadow recruitment vs legal recruitment

Our observations in this study indicate that individuals seek employment on the dark web due to their familiarity with this environment. Job seekers highlight their work experience related to illegal or semilegal work. Some, as mentioned above, enter the dark web job market as teenagers and sometimes have no experience in 'white' (legitimate) work. However, there are other motives for seeking employment on the dark web:

Some individuals already engaged in 'grey' or 'black' activities may be unaware that their work is illegal.

Some become disappointed with 'white' employment and explore the dark web as an alternative.

Lastly, there are those with a desire for excitement, higher pay or accelerated career advancement.

The issue of individuals seeking employment in the dark web job market became especially noticeable in Q4 of 2023, particularly within the IT sector.

So, what are the main differences between the dark web and regular labor markets? In collaboration with colleagues from the Kaspersky Human Resources Department, we conducted a comparative analysis of both, and identified the following trends.

Shadow and legal recruitment: Differences



Requirements for candidates

Over the past three years, requirements have increased for applicants on the dark web, including tests, experience demands, and security checks for attempts to infiltrate the team for espionage. At the same time, employers on the legal job market have become less selective in their hiring, which is associated with labor market depletion.



Al trends

Al specialists have become in demand on the regular job market over the past three years. However, our research has not revealed any significant increase in demand for specialists in this field on the dark web. Nonetheless, there are threads related to the <u>influence of LLM technology</u> on the job market on some popular dark web forums.



Speed at which vacancies are filled

Due to the lack of formalities, it is possible to begin working on the dark web within a few days, as opposed to the average time it takes to fill a vacancy in the real world, i.e. 90 days.

This significant difference can be attributed to the dark web hiring process skipping or fast-tracking steps that are standard in legal recruitment, such as offer approval.



Work format

In legal employment, remote and hybrid work have become the norm over the past six years, and it is customary to specify this in the terms of employment.

In the context of the dark web, remote work is implied for IT specialists, though it is rarely explicitly stated, appearing in only 1.8% of collected advertisements.

Shadow and legal recruitment: Similarities



Skill-based approach

Over the last three years, there has been a decrease in employers' requirements relating to higher education on both legal and dark web job markets, with employers increasingly prioritize practical skills over theoretical knowledge in interviews.



Trends in the number of resumes and vacancies

Coincide in both job markets, although they reach the dark web slightly more slowly.



Background checks

Verification of previous experience is gaining traction globally, whereas on the dark web this procedure has existed for a long time. Employers and applicants seek feedback on potential partnerships, researching their advertisements on different, related forums.



Stable currency salaries

Applicants worldwide in both job markets tend to prefer salaries in US dollars. Comparably, 75% of job seekers on the dark web who specified their desired salary did so in USD.

has

Two hiring pipelines: Similar structures, differing realities

Recruitment pipelines in both legal and dark web job markets are similar, though they still have some differences.

In both cases, the evaluation of the resume occurs in both job markets, whereas the initial interview with an HR specialist was not reported by either employers or job seekers in the threads associated with work on the dark web.

	Legal recruitment	Shadow recruitment
Initial resume assessment	Yes	Yes
Background check	Becoming more popular	Yes
Initial HR interview	Yes	No
HR interview	Optional	Optional, if the team h an HR specialist
Test task	Optional	Optional
Resume assessment by employing team; HR feedback	Optional	No
Technical interview	Yes	Optional
Final interview with team lead	Yes	Yes (personal communication)

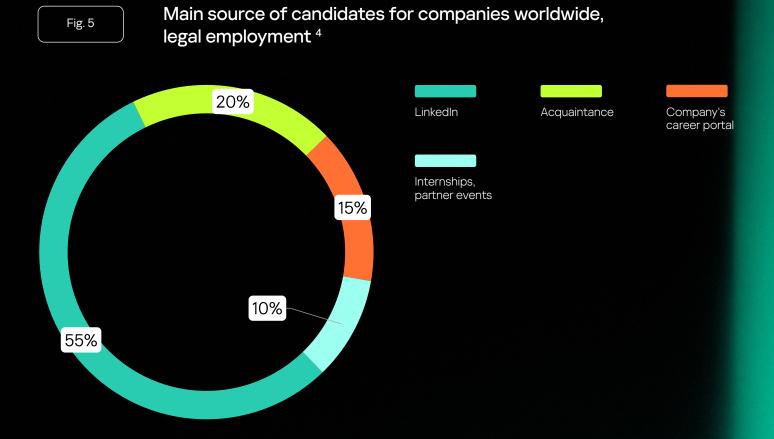
IT candidates' search sources

Apart from forums, employers and job seekers also use Telegram to publish advertisements on the dark web. Targeted chats are created for specific fields or specializations, and these chats can be moderated by bots to ensure that only relevant information is shared.

Publications in the messenger may be posted without specifying a salary or even providing a detailed description of job responsibilities. In these cases, all subsequent communication on the topic takes place through personal messages.

In addition to chats, there are Telegram channels that collect and aggregate job vacancies and / or resumes from popular platforms, as well as directly from HR specialists or employers. Similar to forums, users can leave comments, recommendations and feedback on these advertisements.

Telegram tends to foster narrowly focused communities with an emphasis on networking. In these conditions, it can become easier to find the right person or job.



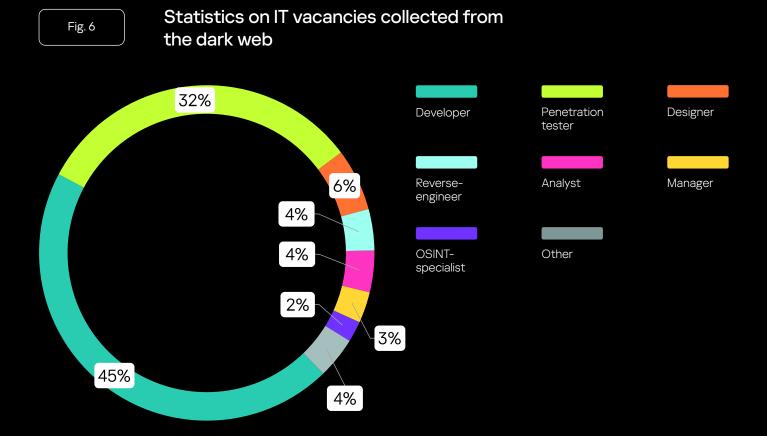
⁴ According to the Kaspersky HR team.

VII. Inside the shadow IT workforce

Of the 1,130 advertisements collected referring to a specific profession or occupation, 40% were related to IT jobs. The dark web job market shows a demand for developers, hackers, analysts and other IT professionals.

To analyze the dark web job market for IT specialists, data from vacancies and resumes was collected and analyzed. Our analysis included working conditions, salary* expectations, requirements for candidates, and the skills most commonly listed in job advertisements.

For this research, we selected the most popular jobs on the dark web job market that also have equivalents in the legal employment sector.



^{*} It is important to note that not all job advertisements specifying salaries were included in the final statistics. In some cases, a minimum salary threshold is required when posting vacancies, which can lead to inflated or inaccurate figures. To ensure the reliability of the data, we excluded such postings from our analysis.



Specialist **Developer**

Average for the dark web

Desired salary	\$2,000
Gender	Male
Age	25 years old
Key skills and abilities	Developer work experience, with knowledge of at least two programming languages.
	Most-mentioned programming languages on the dark web, % of posts
	Python 9,5%
	C# 5%
	PHP 5%
	C++ 3,9%

Developers are among the most in-demand specialists on the dark web. Their work covers a wide variety of tasks, from legal activities, such as creating scripts and websites, to malicious ones, such as deploying phishing websites and creating malware.

JavaScript

2,2%

Developers' resumes are often extensive, providing detailed accounts of their work experience and skills. Vacancies for developers also tend to be more comprehensive, including information about salaries, requirements and working conditions.

Username / REVEX

14.07.2024

looking for a job as a malware developer

Hi everyone,

I am a malware developer with huge experience. I have some good malware in my arsenal like ransomware, keyloggers etc. I am currently looking for a job in a hacker group / organization.

Everything is also written in C++ which is a low-level programming language and provides a huge advantage over most other languages like really fast execution time and a lot more.



Specialist

Penetration tester

Average for the dark web

Desired salary	\$4,000
Gender	Male
Age	30 years old
Key skills and abilities	Either a team player or working independently, providing hacking or attacking services (DDoS attacks, RaaS campaigns, bruteforce, etc.) and even defending customer resources from cyberattacks.
	Skills: understanding of advanced persistence methods, C++, Active Directory.
	Relevant work experience: 3+ years.

Attack and penetration testing professionals, including both black hat and white hat hackers, possess similar skills but have different goals. Black hat hackers carry out cyberattacks for financial gain, white hat hackers simulate attacks to help companies strengthen their cyberprotection.

On the dark web, these professionals are hired, of course, to conduct attacks on businesses and specific individuals. While programmers on the dark web may not necessarily engage in illegal activities, the majority of hackers carry out cyberattacks for personal financial gain.

Username / trollyspace

07.05.2023

Red Teamer looking for a job

I'm looking for a job preferably after the initial access stage. Including getting domain admin, staying hidden in network, exfiltrating etc. Have some good red team certs. Let me know if someone is looking for help.



Specialist **Designer**

Average for the dark web

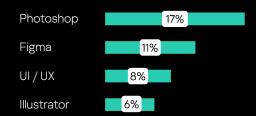
Desired salary Piecework, ranging from \$5 to \$500 per task

Gender

Age 18 years old

Key skills and abilities Little work experience.

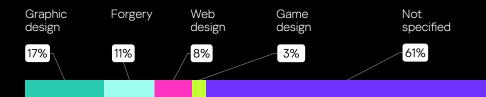
Knowledge of the following tools, % of job seekers



Designers are also among the most sought-after professionals on the dark web, ranking within the top 3 most popular occupations.

They're typically required to design websites, create fake documents, and design simple logos.

Designer specializations on the dark web



Username / Raydar

26.09.2023

[Paid] Graphic designer needed for a project

I need a graphics designer that can create designs for social media based on a content given to that person.



Some of the most specialized IT professionals are reverse engineers. Their work includes **analyzing existing software to reconstruct its logic**, identifying vulnerabilities, and uncovering undocumented functionality that can be exploited.

On the dark web, these professionals are more likely to operate independently, although long-term recruitment was also mentioned in observed advertisements. Nevertheless, these positions are typically short-term and rarely provide detailed descriptions of job responsibilities.

This trend is also reflected in resumes, as reverse engineers rarely disclose personal information or even professional skills due to the highly specialized nature of their work.

• Username / aqaa

need a professional API reverse engineer

need a professional API reverse engineer

An example of a post from a darknet forum



Specialist Analyst

Average for the dark web

Desired salary

Piecework, ranging from \$10 to \$100 per task

Gender

Age

Key skills and abilities

The ability to process and analyze large amounts of data, both manually and using third-party software.

The ability to perform analytical tasks such as forecasting and working with databases.

Analysts on the dark web tend to work with data collected from various sources. This may include malware and other logs, parsing data, stolen data, etc.

• Username / Kllaus 17.06.2023

Hiring people to a private team

Need people to work with logs of one payment system!

Only HIGH PROFIT

29.11.2023



Name

Specialist **Manager**

Average for the dark web

Desired salary	Piecework, fixed percentage from the team's income
Gender	Male
Age	26 years old
Key skills and abilities	Relevant working experience: 3+ years.
	Soft skills: adequacy, accountability.
	Possible working experience in legal recruitment.

The manager is a crucial figure in the IT product development process. Their primary responsibility is to coordinate the team's efforts to achieve a desired outcome.

Username / MrLivian

Working Team Searching for a New partner!

We need a new member in our team!

You task will be to verify and manage a multichannel rental app! If you can do this.... you will get % from income made!



Specialist

OSINT specialist

Average for the dark web

Desired salary

Piecework, ranging from \$1 to \$100 per task

Gender

Age

Key skills and abilities

Analytical skills, open source and dark web forum search.

Google Dorks.

Open-source intelligence specialists are commonly employed in organizations providing information security services, as well as within internal security, economic security or and competitive intelligence teams.

On the dark web, these specialists are mainly involved in corporate and competitive intelligence, as well as searching for databases published on dark web forums and websites at the request of employers (primarily for offensive operations).

Username / elprof3ss0r

01.05.2023

Looking for a Darkweb OSINT team member

Looking for a guy with OSINT experience mainly in Darkweb, Telegram, Discord and more to Join a global team — membership completely anonymously.

job with good money!

VIII. Other specialists

Several other technical professions are less in demand among job seekers and employers but are also represented on the dark web job market.

It is worth noting the decline in the number of advertisements for testers (6 during 2022-2025 compared to 10 during 2019-2022), due to software developers conducting open testing of their products and inviting forum participants to act as testers either free of charge or for a nominal fee.

Username / electro
 12.02.2025

Looking for alpha testers for my RaaS

Hello! I'm looking for alpha testers for my RaaS.

I need teams or individuals with good pentesting skills in ransomware. Debugging is optional but is a plus.

An example of a post from a darknet forum

There were also vacancies on the dark web job market for IT-related specialists, including malware distributors, access and log providers, and HR professionals.

Username / Sp3ctrum

02.12.2023

Experienced team is looking for an access provider \ Any VPN access

Experienced team is looking for an access provider. Huge work experience.

People without bad habits, not 'fading away', not disappearing after payment.

An example of a post from a darknet forum

Username / Stefany

18.02.2023

Looking for HR job but will consider anything

Looking for HR job but will consider anything.

Maybe my experience will be useful for someone. More than 5 years HR team lead experience.

An example of a post from a darknet forum

These specialists play an active role in the development of the dark web job market by assisting fraudulent and APT groups in their campaigns.

It should be noted that there are fewer vacancies for these specialists compared to other roles, as the relevant tasks can often be performed by other professionals. For instance, penetration testers may act as access providers, while traffers may attract users to phishing websites, serving as malware distributors.

IX. What lies ahead

Based on the findings of our research, we are able to make several predictions regarding the future development of the dark web job market.



An increase in qualified professionals

We expect an increase in the number of qualified professionals with work experience in legal employment due to the ongoing trend of layoffs worldwide.



Growth in Al proficiency

The number of professionals on the dark web proficient in working with AI is expected to rise, as the technology becomes a familiar tool for experts in various fields, especially in design and data analysis.



Rising average age of job seekers

For the same reason, the average age of job seekers is expected to increase, as mature professionals turn to the dark web job market in search of employment opportunities.



Market stabilization

Over the next six months, the dark web job market is expected to stabilize, with the number of resumes and vacancies returning to previous levels after the recent period of volatility.

Conclusions: The shadow market reflects the 'real' one...

The dark web isn't just a huge network of forums for illegal activities — it also serves as a job market. Many professionals remain in the shadow economy because it's the environment they know. Once someone gains experience in this sphere, those skills can be difficult to apply elsewhere.

Yet the dark web job market doesn't exist in isolation. In many ways, it reflects the same trends seen in the legal job market. For example, fluctuations in the number of posted vacancies and resumes on dark web platforms mirror broader global economic shifts over the last three years. At the same time, there are notable differences, from how candidates are recruited to the working conditions offered.

IT specialists, particularly developers, remain among the most-indemand professionals in the dark web job market.

At Kaspersky, we recognize that our most valuable asset is our people. This is why we continue to invest in attracting, developing and supporting top talent. <u>Join us</u>.

Protect your business from hidden threats



Kaspersky Digital Footprint Intelligence



Kaspersky Threat Intelligence What we see in the dark web labor market is that cybercrime is highly organized. Threat actors assemble teams before they act: developers to write tools, penetration testers to find weak points, launderers to move funds.

This means the earliest signals of a future attack often appear not only in malware samples or intrusion logs, but also in related publications on the dark web. Tracking those signals allows us to understand who is preparing, what capabilities they're building, and where they may strike next.

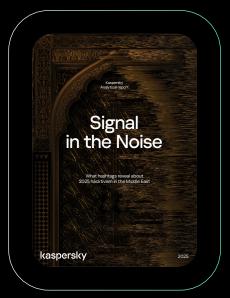
Monitor the dark and surface web to uncover hidden threats in realtime. Understand how attackers view your perimeter and potential entry point.

Know your enemy: Keep your TTPs and loCs up to date to stay aware and prepared for potential attacks.

Analytical report

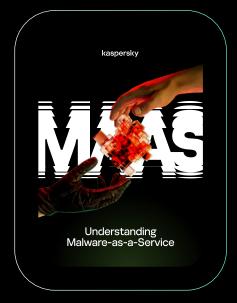
Inside the dark web job market

Their talent, our threat











The rest of the reports can be found on the website

Learn more