

Eastern Region Special Operations Unit



Regional Organised Crime Unit

# Cyber PREVENT;

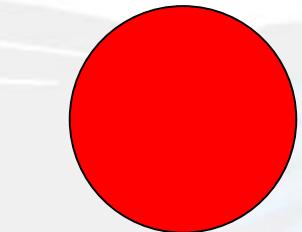
## #CyberChoices

*Preventing individuals from becoming involved in  
cyber dependent crime*

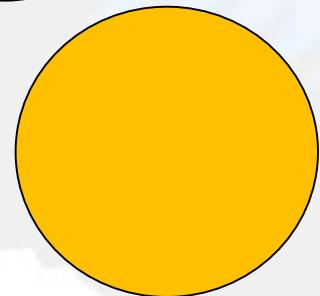
Working with



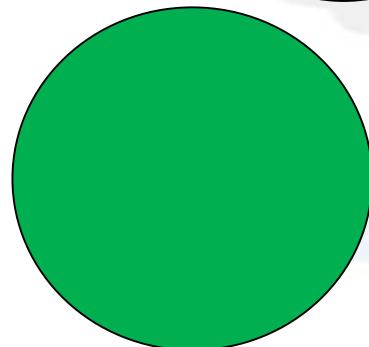
# Cyber Prevent Aims



To deter individuals from getting involved in cyber dependent crime, and prevent re-offending



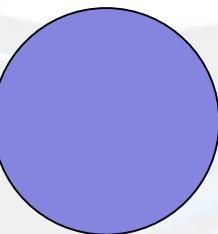
To understand behaviours and motivations behind offending.



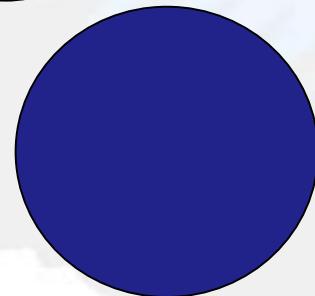
To promote legal and ethical use of skills, including opportunities in cybersecurity



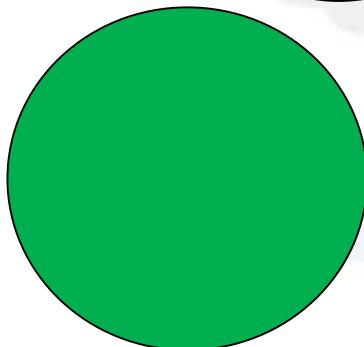
# Cyber Prevent Objectives Today



Raise awareness of what the law says



Inform of the consequences of  
breaking the law

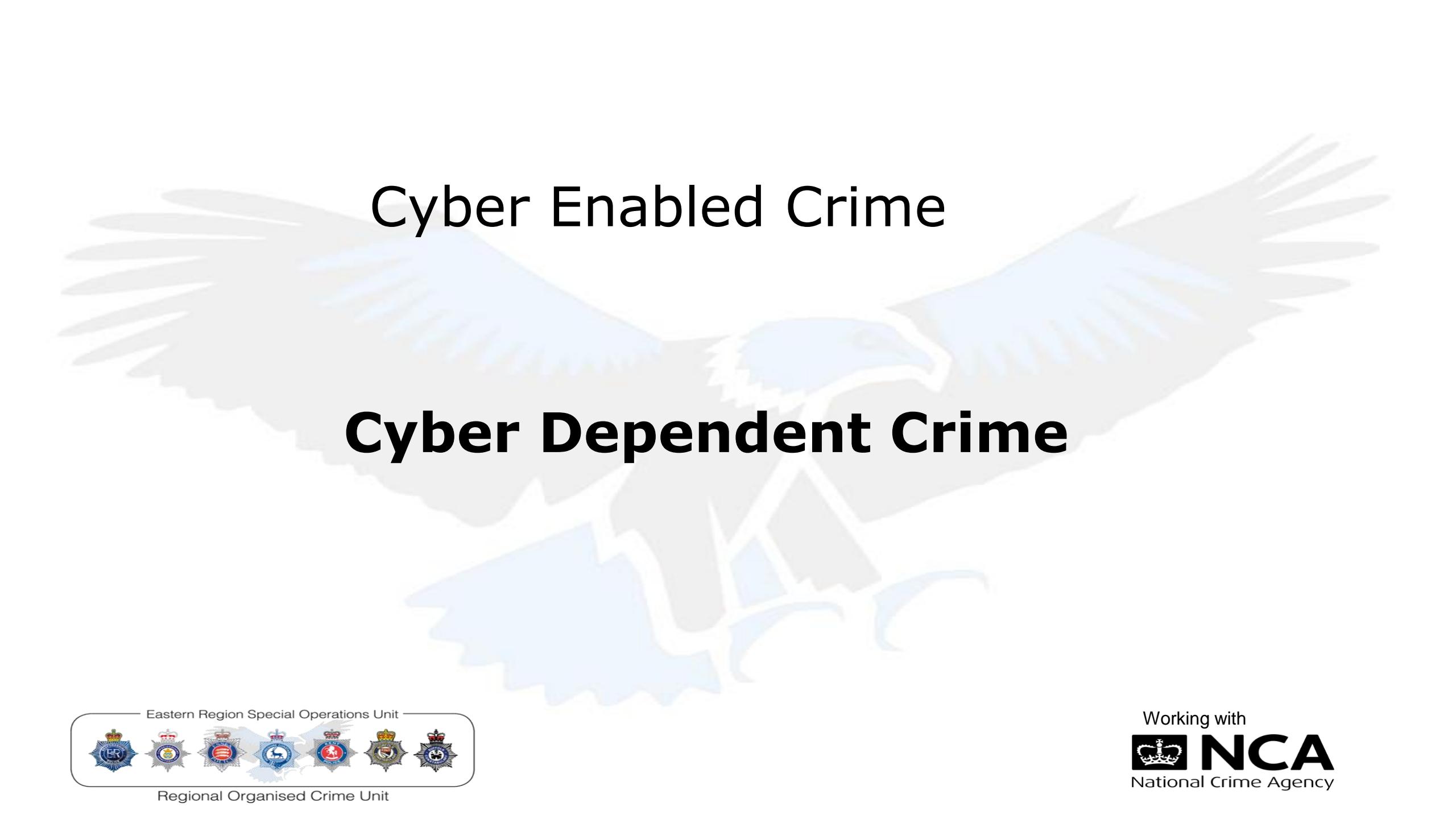


Promote places to go to develop  
skills legally



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# Cyber Enabled Crime

# Cyber Dependent Crime



# Cyber Dependent Crime

## Understanding Behaviours

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# Why this audience?

Based on NCA / NCCU debriefs:

- Average age of those arrested is ?

**17**

- Motivations – challenge rather than financial
- Wouldn't commit traditional crime
- A common pathway identified





Video – Ollie's such a  
clever boy...

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# Pathways

Understanding the pathways for cybercriminals vs those in the cybersecurity professions



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# Impact

Cyber crime is victimless... Isn't it...?

**Small and medium sized businesses are hit by 62% of all cyber-attacks, about 4000 a day – IBM**

**Average price for a small business to clean up after a cyber-attack is £35k – Home Office Research**

**60% of small companies are unable to sustain their businesses over 6 months after a cyber attack – US CSA**

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# Impact

It wasn't that harmful...

**Cyber Attack On 'Code Spaces' Puts Hosting Service Out of Business**

**More deaths linked to Ashley Madison hack as scammers move in**

**Panicked teen hanged himself after receiving ransomware scam email**

**Ransomware attacks on Hospitals put Patients at Risk**

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# Responsibility

With great power...



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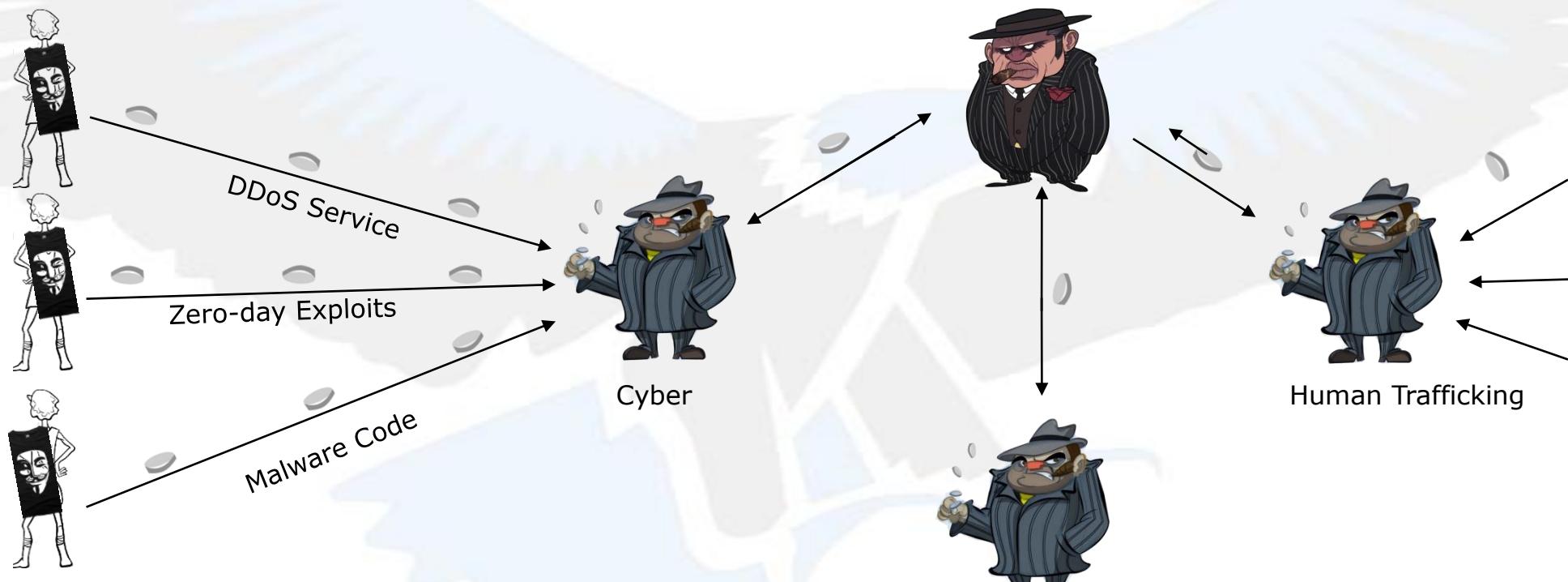
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# Responsibility

Proceeds from purchase of DDoS tools/services, RATs, use of bot nets, sets of account credentials, and exploits  
- where does this money go?

In many cases the money is going to those at the top of Organised Crime Groups; it can be funding the same groups that conduct Human Trafficking, Modern slavery, fraud campaigns on the elderly and more.

This is just a new way for organised crime to make money.



# Legislation; The Computer Misuse Act 1990

Section 1 > Unauthorised access to computer material

Without them knowing, you watched your friend put their password into their phone. You then used it to gain access to their phone and download their photos

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# Legislation; The Computer Misuse Act 1990

Section 1 – Unauthorised access to computer material

Causes a computer to perform any function with intent to secure access to any program or data held in any computer.

'The access is unauthorised'

**R v Ryan Cleary, Jake Davis,  
Ryan Akroyd and Mustafa Al-Bassam** Southwark Crown Court  
32-20 months  
CIA , FBI, Sony, Nintendo



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# #cyberchoices - Ryan

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# Legislation; The Computer Misuse Act 1990

Section 2 > Unauthorised access with intent  
to commit or facilitate commission of  
further offences

Without their permission, you accessed your  
friend's smartphone, obtaining their bank details,  
so you could transfer money from their account

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# Legislation; The Computer Misuse Act 1990

Section 2 – Unauthorised access with intent to commit or facilitate commission of further offences

Example; RAT software then used to commit voyeurism



Shaun Turner  
Peterborough Crown Court  
Jan 2017 - 3 years imprisonment

S49 RIPA SHPO 10 yrs

# Legislation; The Computer Misuse Act 1990

Section 3 > Unauthorised acts with intent to impair, or with recklessness as to impairing, operation of computer

You used a booter tool to knock a friend offline from an online game

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# Legislation; The Computer Misuse Act 1990

Section 3 – Unauthorised acts with intent to impair (or recklessness) operation of computer

DDOS



Adam Mudd  
Apr 17 Old Bailey  
- 2 years  
Creator and  
admin for  
Titanium Stressor

# Legislation; The Computer Misuse Act 1990

Section 3 – Unauthorised acts with intent to impair (or recklessness) operation of computer



Zain Qaiser  
6 years 5 months  
8<sup>th</sup> April 2019 Kingston Crown Court

All the activity of this computer has been recorded.  
If you use a webcam, videos and pictures were saved for identification

Your IP-Address: 86.31.49.61  
Your Hostname: 86.31.49.61

Your Internet Service Provider has been notified by our cyber crimes Unit pending your response to be noticed

**Your Computer has been locked!**

Illegally downloaded material (MP3's, Movies or Softwares) have been located on your computer.

Downloading these files is a criminal offence under the Section 106 of the Copyright Act.

The Downloading of Copyrights materials via the Internet or music-sharing networks is illegal and under Section 106 of the Copyright Act. You are subject to a fine of \$200,000 or imprisonment for a maximum of 3 years.

Furthermore, possession of illegally downloaded material is

**MoneyPak**

MoneyPak is the only payment option. Follow the instructions on the right to obtain your MoneyPak Code

Code:  Submit

Enter your Code utilizing the Pin-Pad below.

1 2 3 4 5 6 7 8 9 0 <-

In order to avoid a higher fine or imprisonment and to unlock your Computer you must pay a fine.

Please note: This fine may only be paid within 48 hours, if you let 48 hours pass without payment, the possibility of unlocking your computer expires.

In this case a criminal case against you will be initiated automatically.

This page was secured by McAfee Security Alliance on: 2012-10-24

McAfee Security Alliance

To unlock your computer and to avoid other legal consequences, you are obligated to pay a release fine of \$200. Payable through GreenDot MoneyPak. After successful payment, your computer will automatically unlock.

Failure to adhere to this request will involve criminal charges and possible imprisonment.

To perform the payment, enter the acquired GreenDot MoneyPak code in the designated payment field and press the "Submit" button



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# Legislation; The Computer Misuse Act 1990

Section 3A > Making, supplying or obtaining articles for use in another CMA offence

You downloaded a product to deploy malware to a friend's computer, so you could control it.  
You didn't even get the chance to use it

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# Legislation; The Computer Misuse Act 1990

Section 3ZA > Unauthorised acts causing, or creating risk of, serious damage

You hacked into the computer system of a Government Agency and were reckless as to the consequences. National security was undermined

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# Legislation; The Computer Misuse Act 1990

Section 3a – Making (adapt), supplying ( offer to supply) or obtaining articles for use in a 1-3 offence.

Section 3Za – Unauthorised acts causing or creating risk or serious damage ( human welfare or national security)



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# Consequences

- A visit and warning from the Police
- Being Arrested
- Having your computer(s) seized and internet access restricted
- Paying a penalty or fine
- A significant prison sentence
- A permanent criminal record could affect education and career prospects, as well as overseas travel.

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# Consequences



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# Consequences

Section 1	up to 2 years and / or a fine
Section 2	up to 5 years and / or a fine
Section 3	up to 2 years and / or a fine
Section 3A	up to 2 years and / or a fine
Section 3Za	up to 14 years and /or a fine...  Unless there is serious risk or actual harm to national security or human welfare; in which case up to Life imprisonment



# #cyberchoices - James

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Now the Good Stuff 😊

**Using Skills Responsibly**

&

**Opportunities**



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# Sooo... What CAN I do?

Where can I go to practice or find out more?

[cybersecuritychallenge.org.uk](http://cybersecuritychallenge.org.uk)

The screenshot shows the homepage of the Cyber Security Challenge UK website. At the top, there is a red header bar with the 'Cyber Security Challenge UK' logo on the left and two buttons: 'Play now' and 'Register to play'. Below the header, there is a navigation menu with links to 'Competitions', 'Education', 'Sponsors', 'About', 'Careers', 'News & Events', and 'Insi'. The main content area features a large image of people working at computer monitors, one of which displays a timer at '00:28:48'. Overlaid on this image is the text 'Play the Challenge' in large white letters. Below this, a descriptive paragraph reads: 'Cyber Security Challenge UK runs a series of competitions designed to test your cyber security skills. They are created by our sponsor community, some of the largest security companies in the country, who are looking for the next generation of cyber defenders.' A 'Play now' button is located at the bottom of this section.

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## Sooo... What CAN I do?

Where can I go to practice or find out more?

The image displays three separate web pages side-by-side against a background of white feather-like shapes.

- IL IMMERSIVELABS**: The logo consists of a blue square with 'IL' in white, followed by the word 'IMMERSIVELABS' in black and blue. Below it is a dark banner with the word 'CYBRARY' in white, and the tagline 'Build your cyber security or IT career, for free.' in white.
- CYBRARY**: A dark banner with the word 'CYBRARY' in large white letters. Below it is a tagline 'Build your cyber security or IT career, for free.' in white. To the right is a portrait photo of a woman with curly hair.
- SANS CYBERACES**: The logo features 'SANS' in white and 'CYBERACES' in blue with a star icon. Below the logo is a binary code pattern. The page has a navigation bar with 'Courses', 'About', and 'Cont'. At the bottom, a large white text box reads 'Your gateway to cybersecurity skills and careers.'

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## Sooo... What CAN I do?

Where can I go to practice or find out more?

Hacking (but legally!)

hackerone

YES WE H~~A~~C<sup>K</sup>

bugcrowd



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## The teenage 'white hat' hacker getting rich legally

Teenage hacker Sam Curry from Nebraska earns about \$100,000 a year by working 20 hours a week.

He's a 'white hat' hacker, which means companies pay him, and others like him, to hack their websites to find weaknesses in their security systems.

The 'ethical hacking' industry is worth billions and operates around the world.

Sam told **BBC Minute**: "It's changed my life, it's such a rush."

05 Jan 2019

[f](#) [m](#) [t](#) [e](#) [s](#) Share

# Watch Report

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## How one teenager is making millions by hacking legally

This is 19-year-old Santiago Lopez from Argentina.

He's the first millionaire bug-bounty hacker, which means he gets paid to find glitches in the software of some of the world's biggest companies.

Mr Lopez made his money on the world's biggest ethical hacking platform: HackerOne.

BBC News' Joe Tidy has been to see how he spends the money.

01 Mar 2019

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# Watch Report

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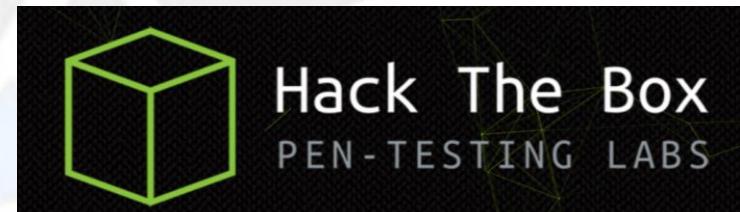
## Sooo... What CAN I do?

Where can I go to practice or find out more?

## Hacking (but legally!)

'Hack me' / learning sites

There are dozens – search them out.



Caution – forums may contain bad actors



## **Sooo... What CAN I do?**

Where can I go to practice or find out more?

## **Hacking (but legally!)**

'Hack me' / learning sites  
There are dozens – search them out.



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## **Sooo... What CAN I do?**

Where can I go to practice or find out more?

## **Hacking (but legally!)**

Virtual Machines **vmware**<sup>®</sup>

Build your own network and  
hack to your heart's  
content -e.g. VirtualBox,



# Opportunity

Typical Job search (Indeed Jobs);

"information security"	UK	21,051
	London	7,441
"cyber security"	UK	3,873
	London	1,686
"coding"	UK	8,704
	London	3,505
"software"	UK	75,757
	London	26,347

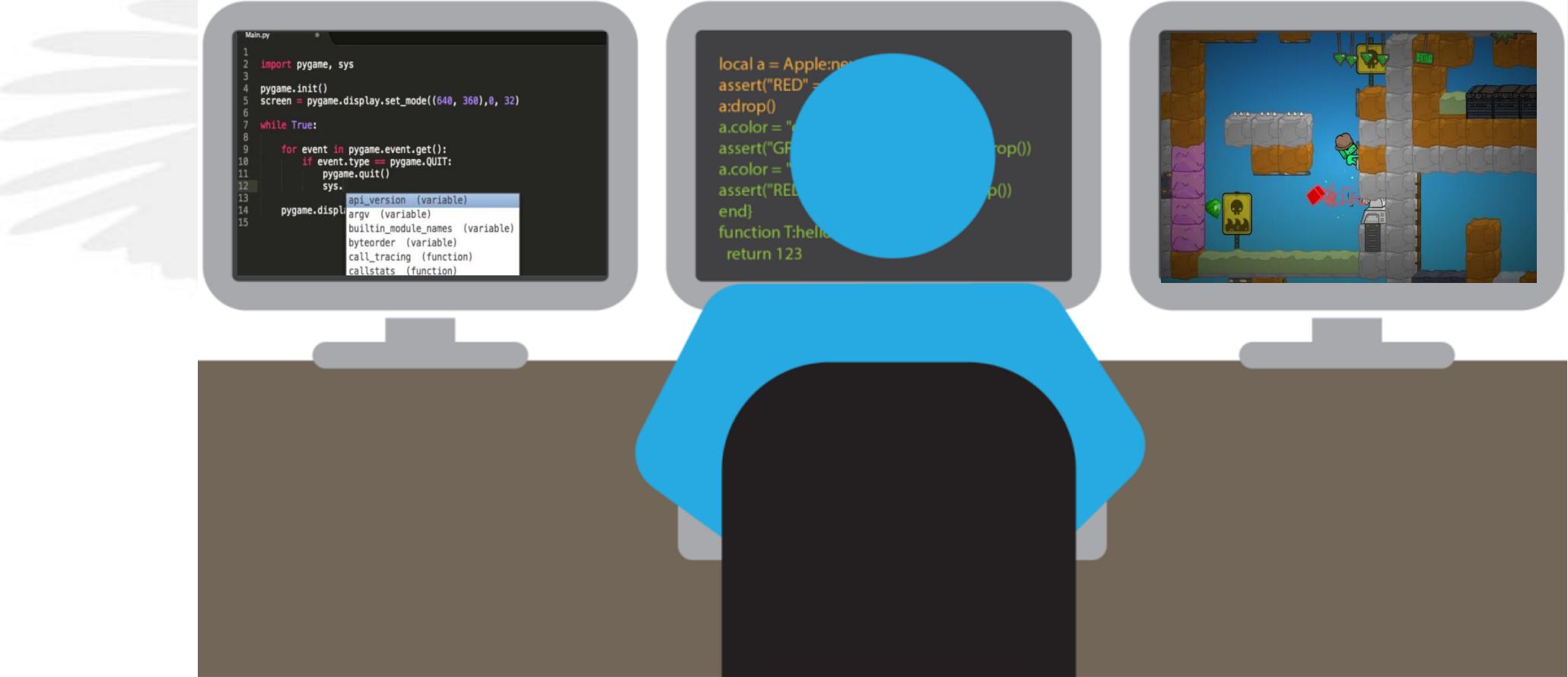


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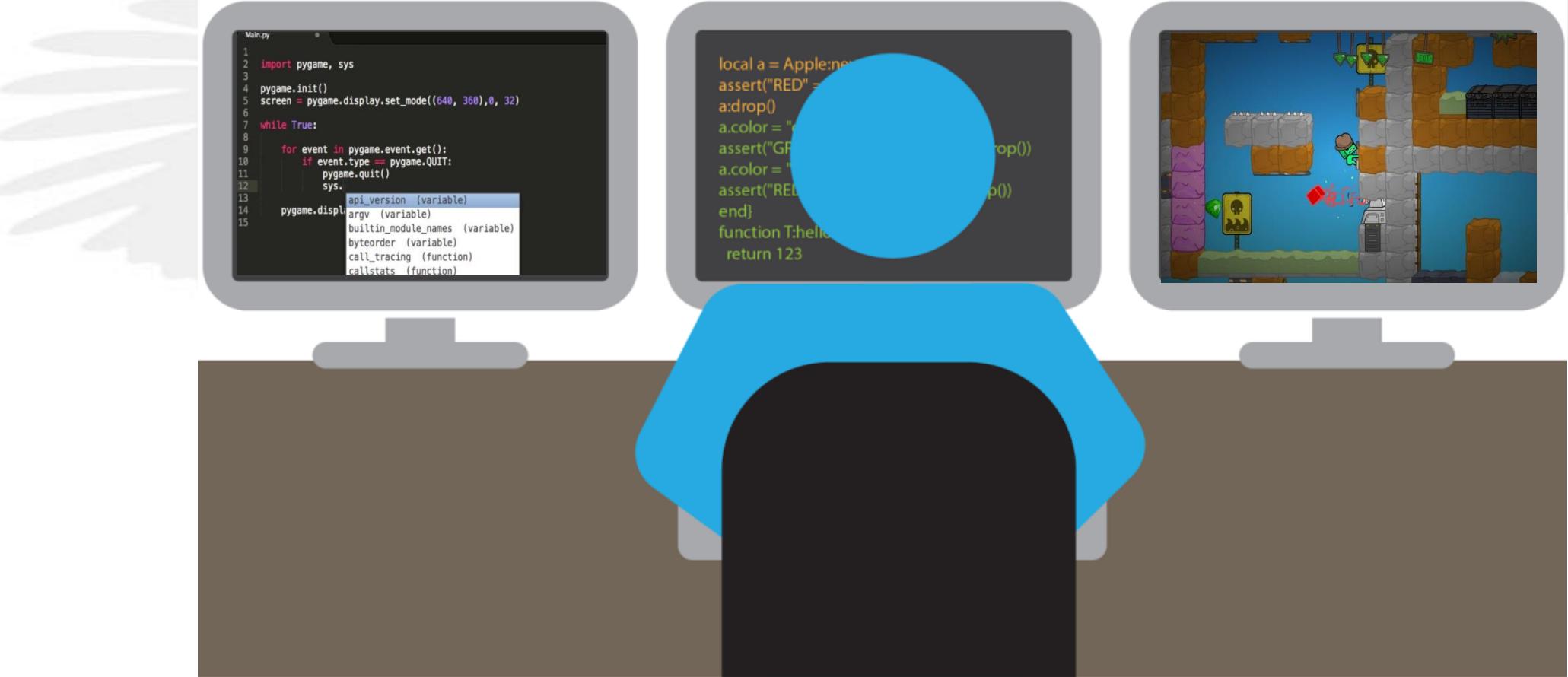


# Opportunity

You have options available to you: Game Developer



```
Main.py
1 import pygame, sys
2
3 pygame.init()
4 screen = pygame.display.set_mode((640, 360), 0, 32)
5
6 while True:
7
8     for event in pygame.event.get():
9         if event.type == pygame.QUIT:
10             pygame.quit()
11             sys.
12
13     pygame.displaapi_version (variable)
14     argv (variable)
15     builtin_module_names (variable)
16     byteorder (variable)
17     call_tracing (function)
18     callstats (function)
```



```
local a = Apple:new()
assert("RED" == a.color)
a:drop()
a.color = "GREEN"
assert("GREEN" == a.color)
a:drop()
a.color = "RED"
assert("RED" == a.color)
end]
function Thing:helicopter()
    return 123
end
```



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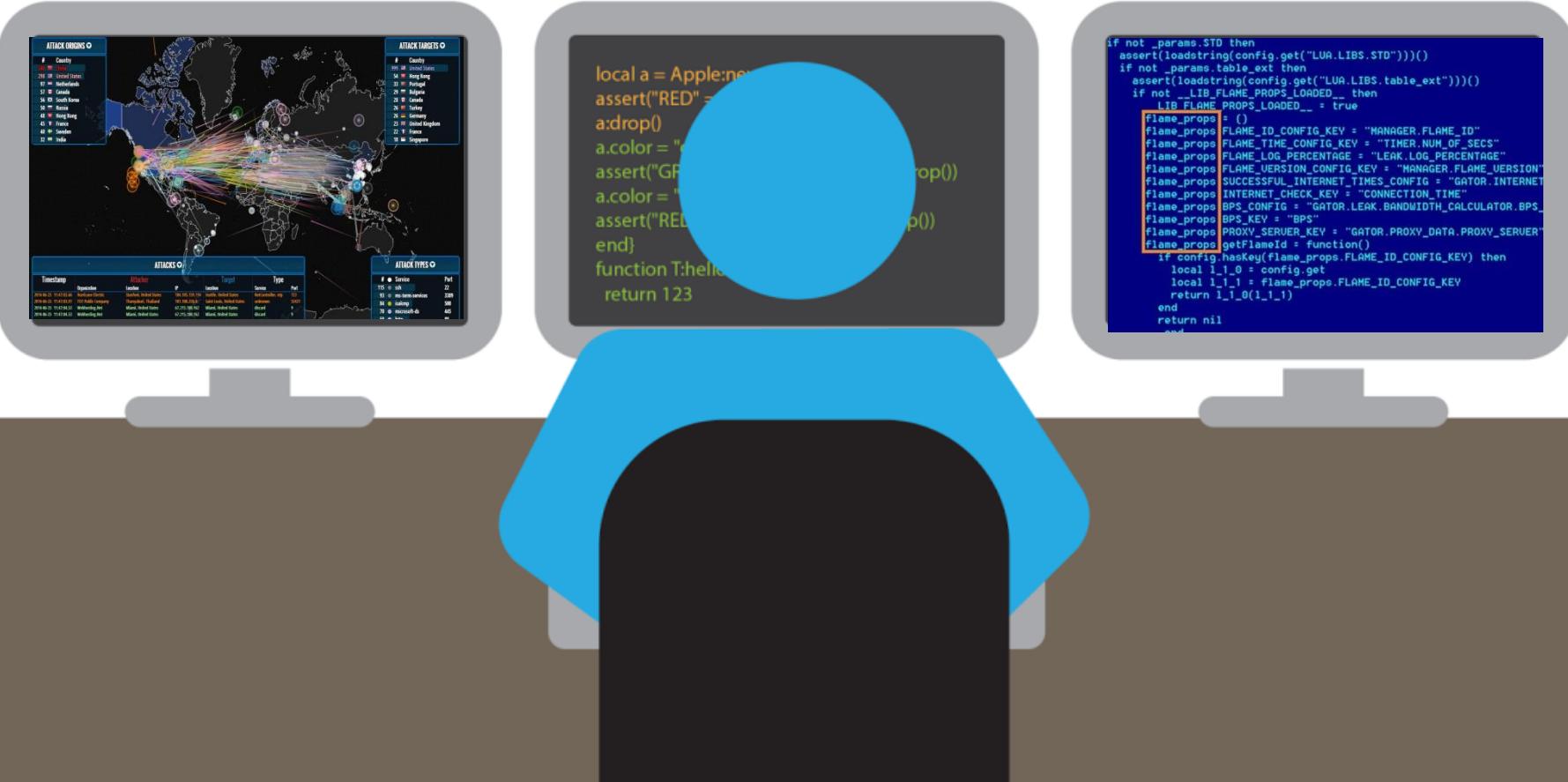
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# Opportunity

You have options available to you: Cyber Security Analyst



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# Opportunity

You have options available



## Select a qualification

- CREST Registered Threat Intelligence Analyst
- CREST Practitioner Intrusion Analyst
- CREST Practitioner Security Analyst
- CREST Registered Penetration Tester
- CREST Certified Web Application Tester
- CREST Certified Infrastructure Tester
- CREST Certified Simulated Attack Manager
- CREST Certified Simulated Attack Specialist
- CREST Certified Threat Intelligence Manager
- CREST Wireless Specialist
- CREST Registered Intrusion Analyst
- CREST Certified Network Intrusion Analyst
- CREST Certified Host Intrusion Analyst
- CREST Certified Malware Reverse Engineer
- CREST Certified Incident Manager
- CREST Registered Technical Security Architect

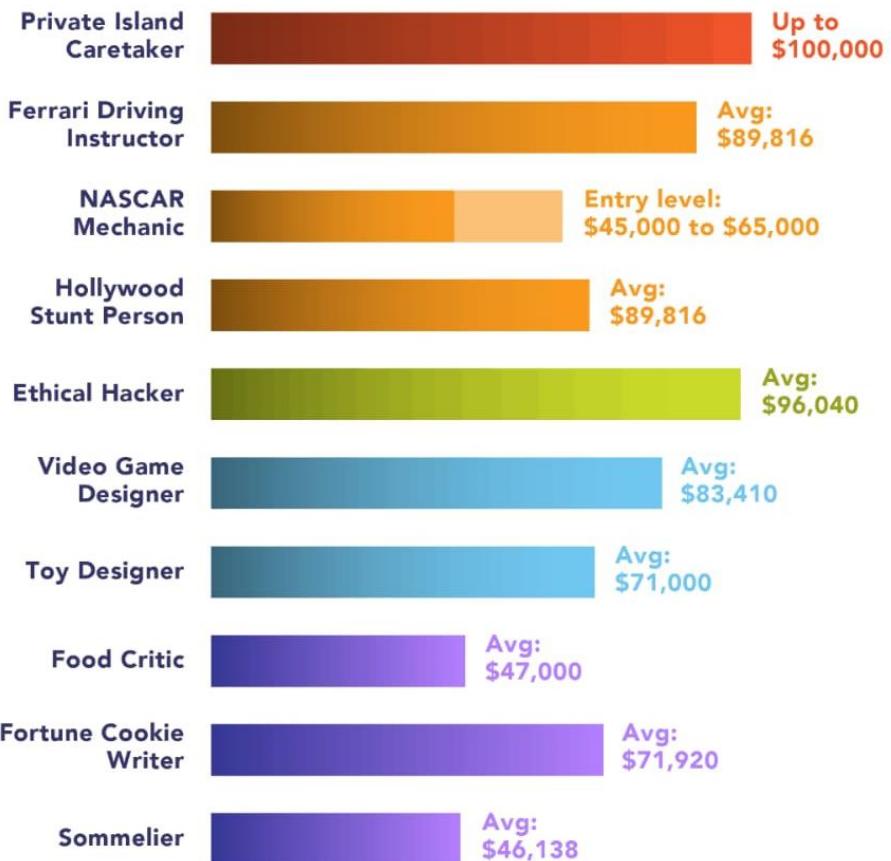
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# 10 Fun Jobs That Pay Well



Sources: U.S. Bureau of Labor Statistics; NBC News; Payscale; Indeed; Job Monkey; PayScale; and Hot Rod Network.

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# Opportunity

You have options available to you: Law Enforcement plus many more



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# Opportunity

A number of employers are setting up schemes to get people into cyber & tech careers



A cartoon illustration of a character with black hair and a red headband peeking over a red wall. The character has a determined expression with furrowed brows. Below the character, the text "Welcome to the NCC Group Graduate challenge!" is displayed in green. In the dark grey background below the character, the text "Got a academic email address (.ac.uk, .edu, .sch.uk) ? Click here to register" is shown in white.

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**SouthStep**

Sponsored •

...

Ever thought about working in Cyber Security?

- The average salary for the Cyber Security industry is between £70,000 and £80,000pa, starting from £40,000-£45,000 pa. With the top earners over £140,000pa
- In April 2018, the average salary for Cyber Security jobs rose by (16%) year on year
- Get a free demo and brochure on how to become a Cyber Security Expert as they are urgently needed throughout the UK. All levels of experience considered.
- The skills shortage is only set to rise by 2022 it is predicted to be 1.8 million.

Figures from cw jobs and IT job watch  
November 2018



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VS



# Make the right #CyberChoices

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# Any Questions?

**[cyberprevent@ersou.pnn.police.uk](mailto:cyberprevent@ersou.pnn.police.uk)**



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