23 ORACLE-COPS

HOW AI SYSTEMS HUNT CRIMINALS

**Detecting crimes before they happen! How is that possible?**

The game in this box roughly simulates the predictive policing AI system developed by the US company Geolitica and uses scientific insights into crime prevention from the USA and Germany.
This is how Geolitica's AI system works:

1. The AI system is trained with local police information on past years' crimes: type of crime, location, date/time.

2. Assumption: Criminals often operate again at the same crime scene or nearby.

3. The AI system calculates the locations where crimes are likely to occur.

4. These "hotspots" are marked on an interactive map and are recommended for increased police patrol routes.

Prone to Errors

This AI system only has access to police data. However, there are far more crimes than what the police are aware of. For example, if many crimes occur in an area but the police are rarely called, the AI system won't mark that area as a hotspot. As a result, police work there becomes even less effective. Understanding the reasons for the emergence of crimes is not easy. Scientific research is continually evolving.
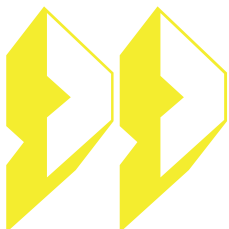
What do you think?
What are the reasons to use an AI system in police work?
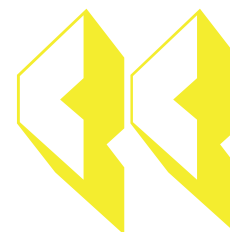**What are the risks? Discuss with other students.**

23 ORACLE-COPS

Did you distribute the coins correctly?

Here's the solution:
Which route should the police patrol take?

= blue coin	Factor reinforces the tendency of crime development
= yellow coin	Factor weakens this tendency.
(light)	Faktor has no effect.

Factors	Streets						
	A	B	C	D	E	F	G
1. first-person shooter	no effect						
2. movies that glorify violence							no effect
3. Nobel Peace Prize laureate		no effect					
6. many flowers						no effect	
4. affordable rents	blue	blue					blue
5. run-down buildings	blue				blue		
7. skipping school			blue			blue	
8. high unemployment rate	blue				blue		
9. high building density	blue		blue		blue		blue
10. frequent drug abuse	blue						blue
11. bad reputation	blue		blue				blue
12. few leisure activities		blue			blue		
13. well-lit street		yellow		yellow	yellow		
14. high-quality houses			yellow	yellow			yellow
15. playground, fitness centre	yellow	yellow					
16. rents constantly increasing			yellow		yellow		
17. easily visible public places			yellow		yellow	yellow	
18. no obscure niches		yellow		yellow			
19. residential buildings and shops		yellow		yellow		yellow	
20. very good reputation				yellow	yellow		
factors that strengthen tendency	6	2	3	0	4	1	4
factors that weaken	1	4	3	5	4	2	1
factors without effects	1	1	0	0	0	1	1
Police patrol: Yes or No?	Yes	No	Yes	No	Yes	No	Yes

23 ORACLE-COPS
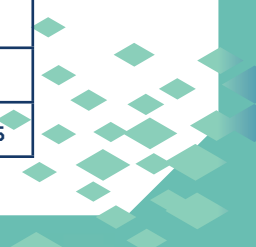
Factors that make crimes more likely (blue coin)

LOW RENTS

People affected by poverty rely on low rents. In residential areas with a high poverty rate, the added pressure of socially disintegrating forces can dissolve societal bonds. Neighbourhood support and mutual social control diminish. As a result, crime has more opportunities to spread. However, this doesn't happen automatically!

(Wickert/Shaw & McKay)

MANY OLD, RUN-DOWN BUILDINGS

Certain structural features and conditions signal that everything is already broken here and there's no need to treat things carefully. This can also promote criminal activity.

(Schmidt, 2016)

MANY TEENAGE TRUANTS

Studies show that adolescents who frequently skip school over a long period are more susceptible to criminal behaviour.

(Wickert/Shaw & McKay)

VERY HIGH UNEMPLOYMENT RATE

Prolonged unemployment places people under high stress and often forces them to move to areas with low rents. These residential areas can sometimes, in line with the low rent factor, develop a higher likelihood of criminal activity. However, this doesn't happen automatically!

(Wickert/Shaw & McKay)

Factors that make crime less likely (yellow coin)

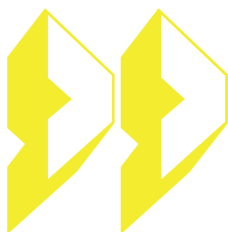## NO OBSCURE NICHES, STREETS EASILY VISIBLE, WELL-LIT STREETS

Obscure, poorly lit places or streets provide hiding spots for criminals.

(Oscar Newman, 1996)

INCREASING RENTS

High rents are only affordable for people with higher incomes. They often have a strong interest in robust neighbourhood control – which, in turn, prevents crime.

(Wickert/Shaw & McKay)

Please note that none of these factors is solely responsible for crime; they only have an effect in combination and accumulation. Also, poverty or unemployment does not automatically lead to criminal behaviour!

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