Final_Overview_Crimes_Mal aysia (1)

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CRIME EVOLUTION IN MALAYSIA (2021–2023)

Data-Driven Insights for Public Safety

PROBLEM STATEMENTS

Crime rates in Malaysia fluctuated significantly between 2021 and 2023, with notable variations across states and crime types.

Urbanized regions like Selangor and Kuala Lumpur report higher crime rates, while specific districts show emerging trends.

Assault crimes (e.g., robbery, gang-related violence) and property crimes (e.g., vehicle theft, house break-ins) remain major concerns.

OBJECTIVES

Objective 1:

To analyze the annual crime trends in Malaysia between 2021 and 2023

Objective 2:

To identify crime hotspots and regional variations in crime patterns
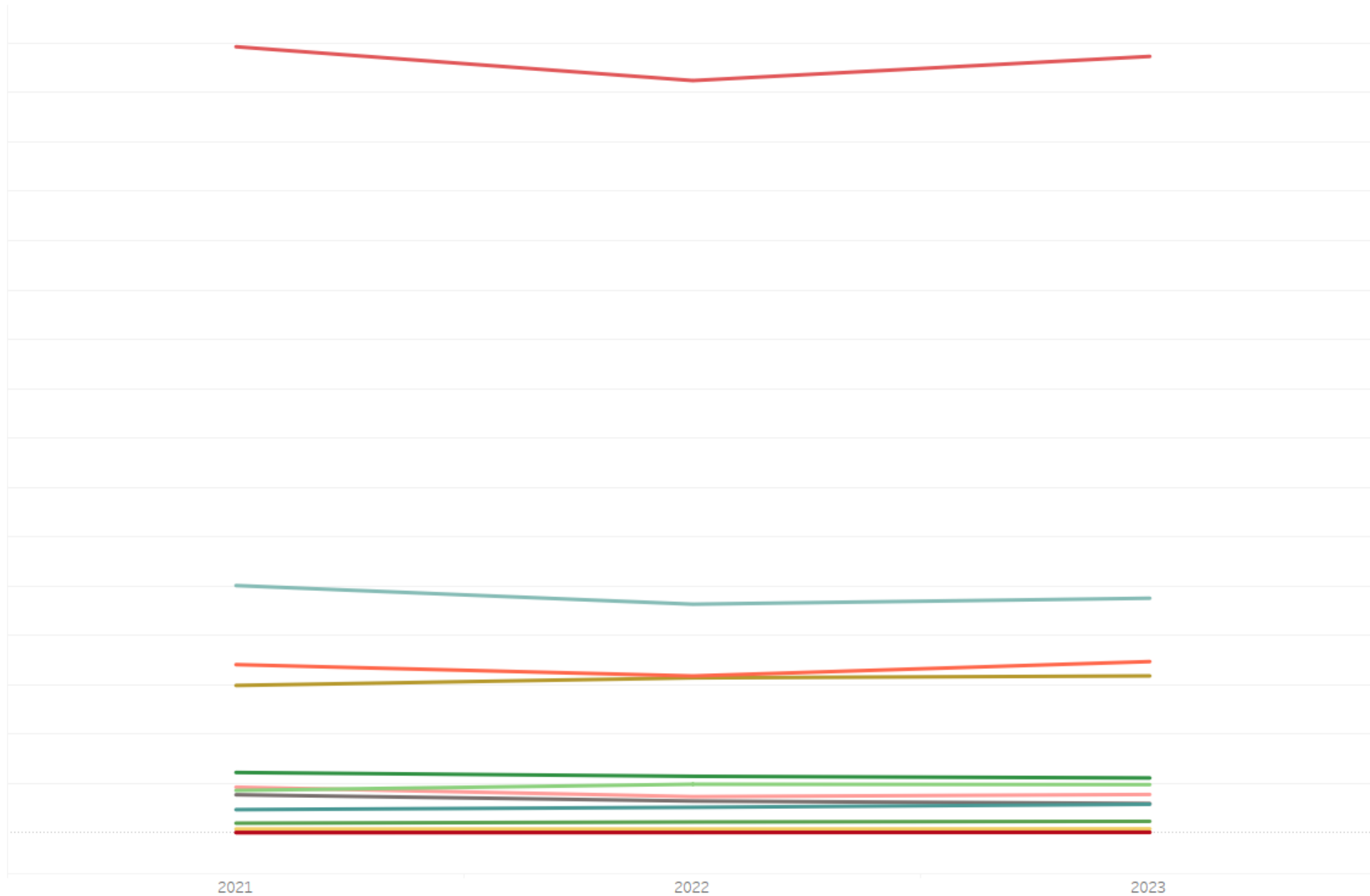within Malaysia from 2021 to 2023

Objective 3:

To examine the relationship between different types of crime
(Assault vs Property Crimes) and their distribution across states in Malaysia
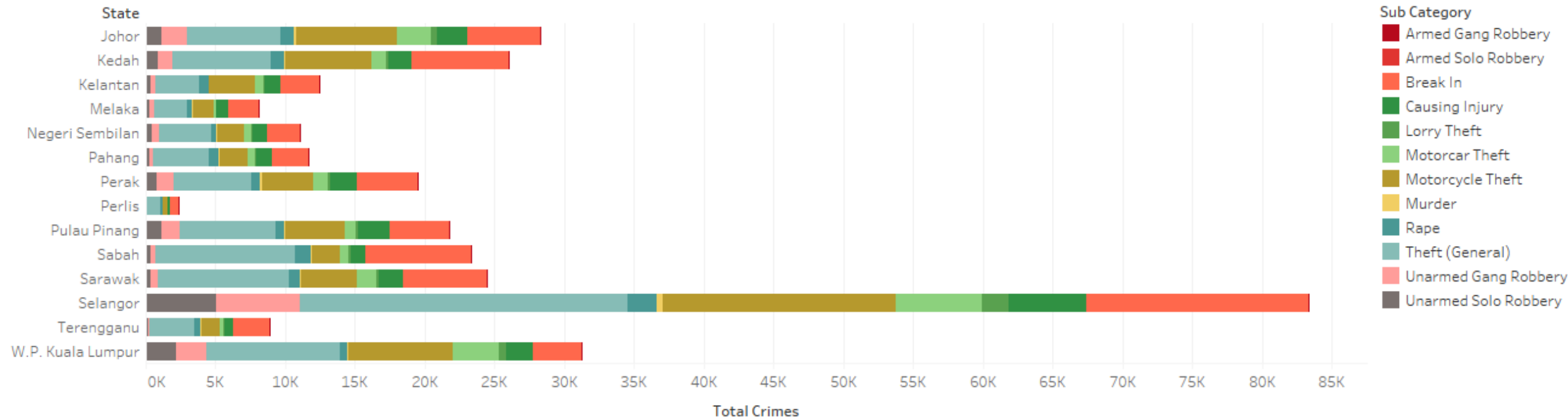
Crime Trends Over Time

Year

Sub Category

- ■ Armed Gang Robbery
- ■ Armed Solo Robbery
- ■ Break In
- ■ Causing Injury
- ■ Lorry Theft
- ■ Motorcar Theft
- ■ Motorcycle Theft
- ■ Murder
- ■ Rape
- ■ Theft (General)
- ■ Total
- ■ Unarmed Gang Robbery
- ■ Unarmed Solo Robbery

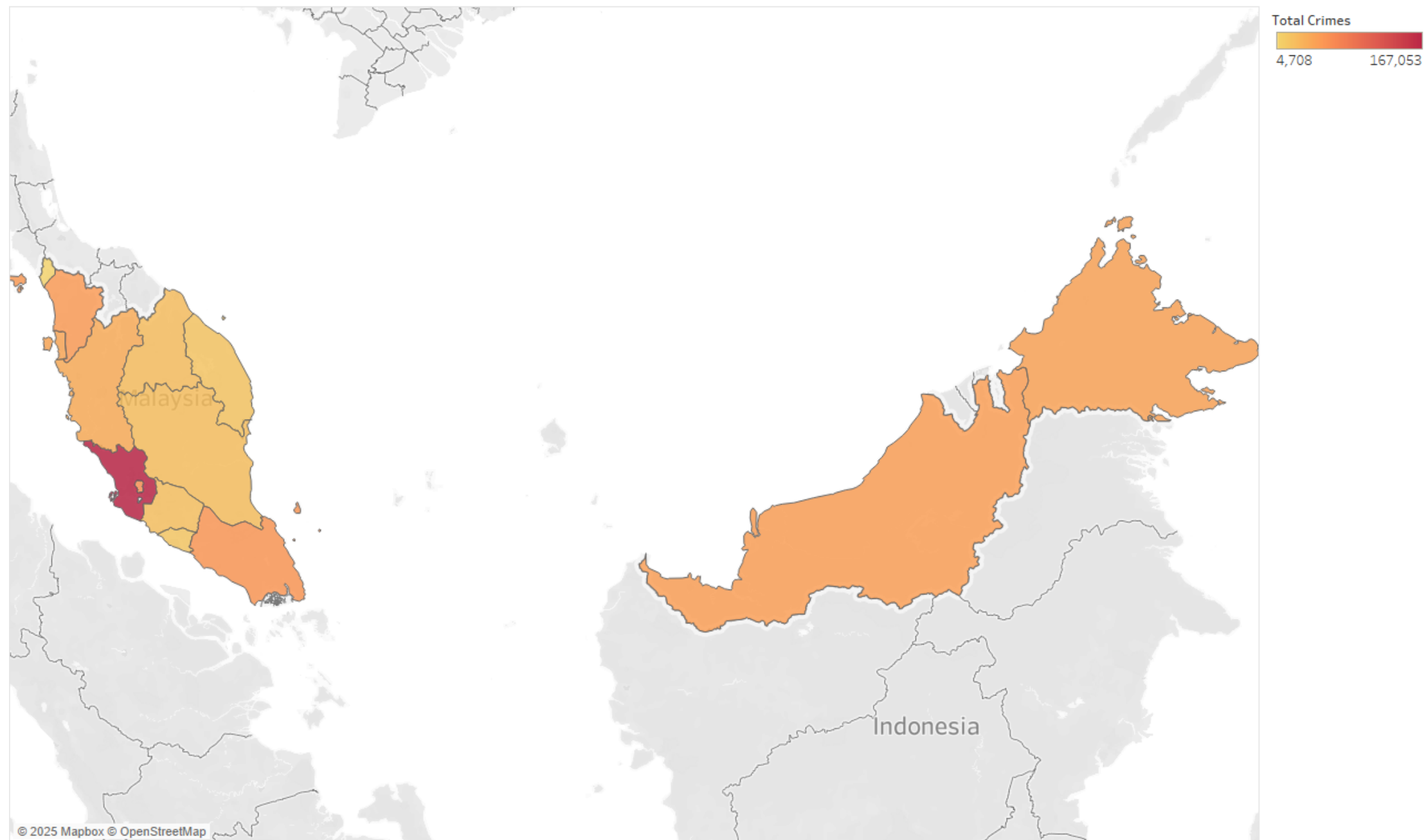|		
2021	2022	2023

The trend of sum of Total Crimes for Year Year. Color shows details about Sub Category. The view is filtered on Year Year, which keeps 2021, 2022 and 2023.
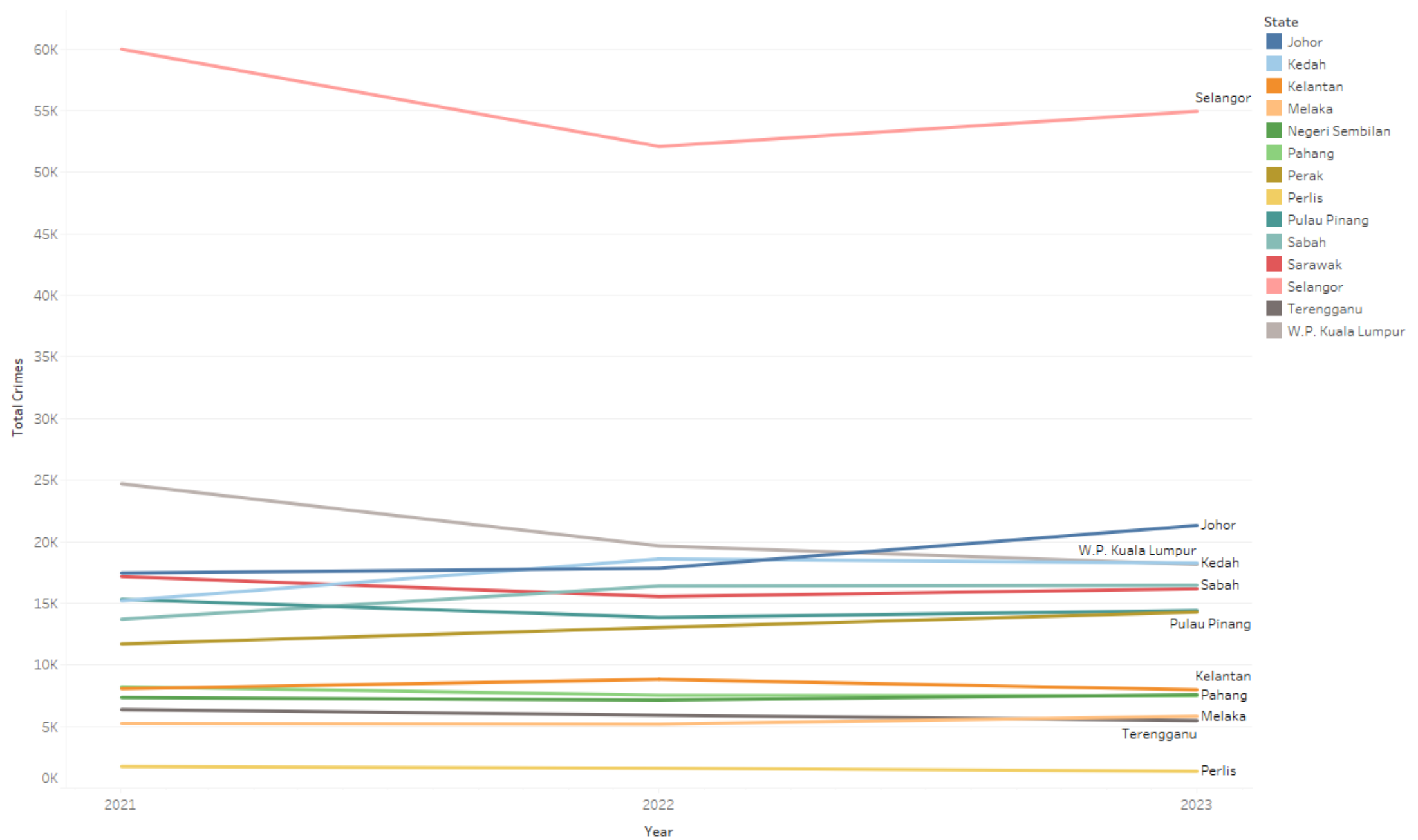
Crime Sub-Category Breakdown by State

Sum of Total Crimes for each State. Color shows details about Sub Category. The data is filtered on Year Year and Exclusions (Category,State). The Year Year filter keeps 2021, 2022 and 2023. The Exclusions (Category,State) filter keeps 28 members. The view is filtered on Sub Category, which excludes Total.

Crime Hotspots Across States in Malaysia (2021–2023)

Total Crimes

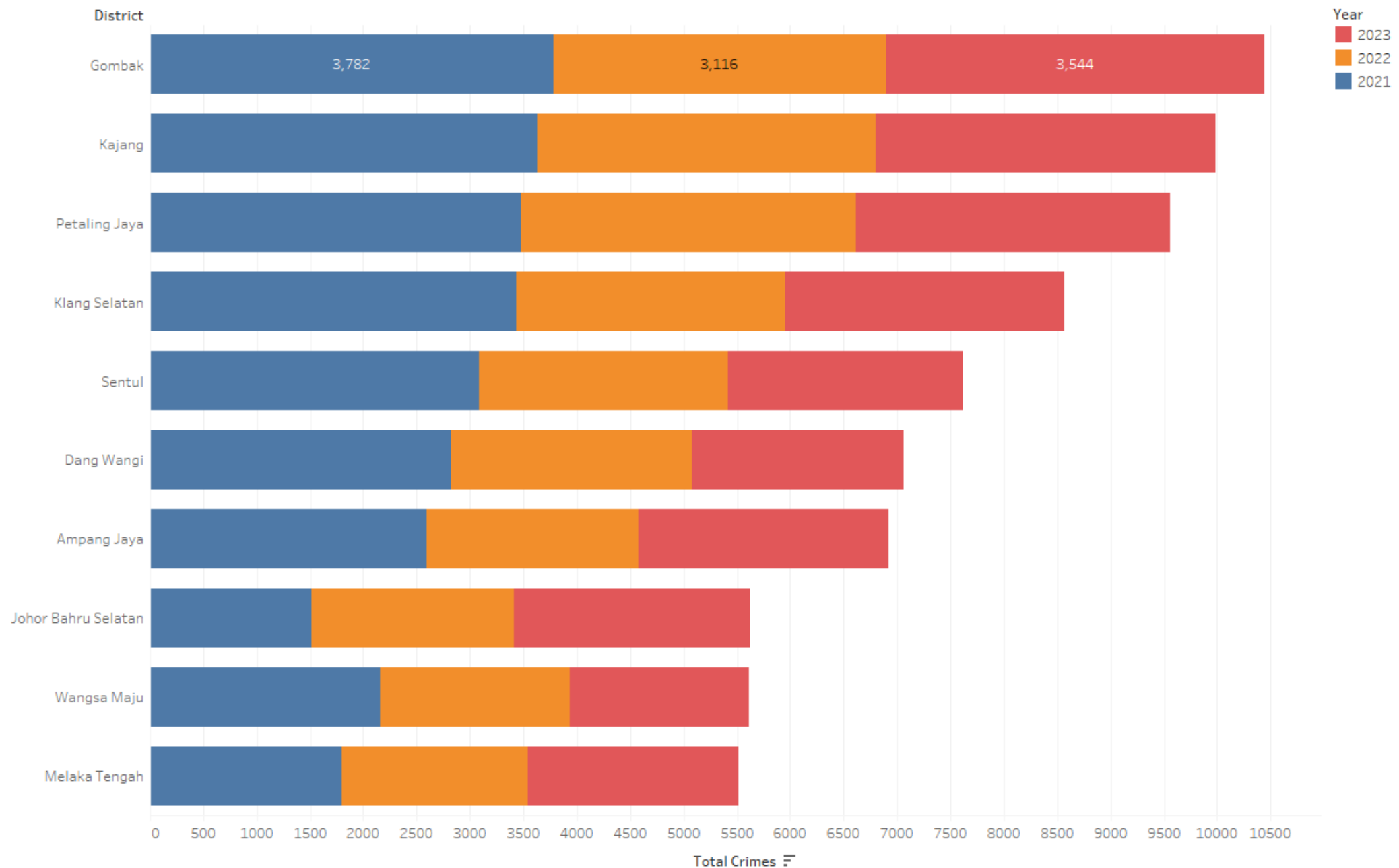4,708   167,053

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Map based on Longitude (generated) and Latitude (generated). Color shows sum of Total Crimes. Details are shown for State and Country. The data is filtered on Year Year and Action (District,YEAR(Year)). The Year Year filter keeps 2021, 2022 and 2023. The Action (District,YEAR(Year)) filter keeps 1,256 members. The view is filtered on State, which excludes Malaysia and Null.

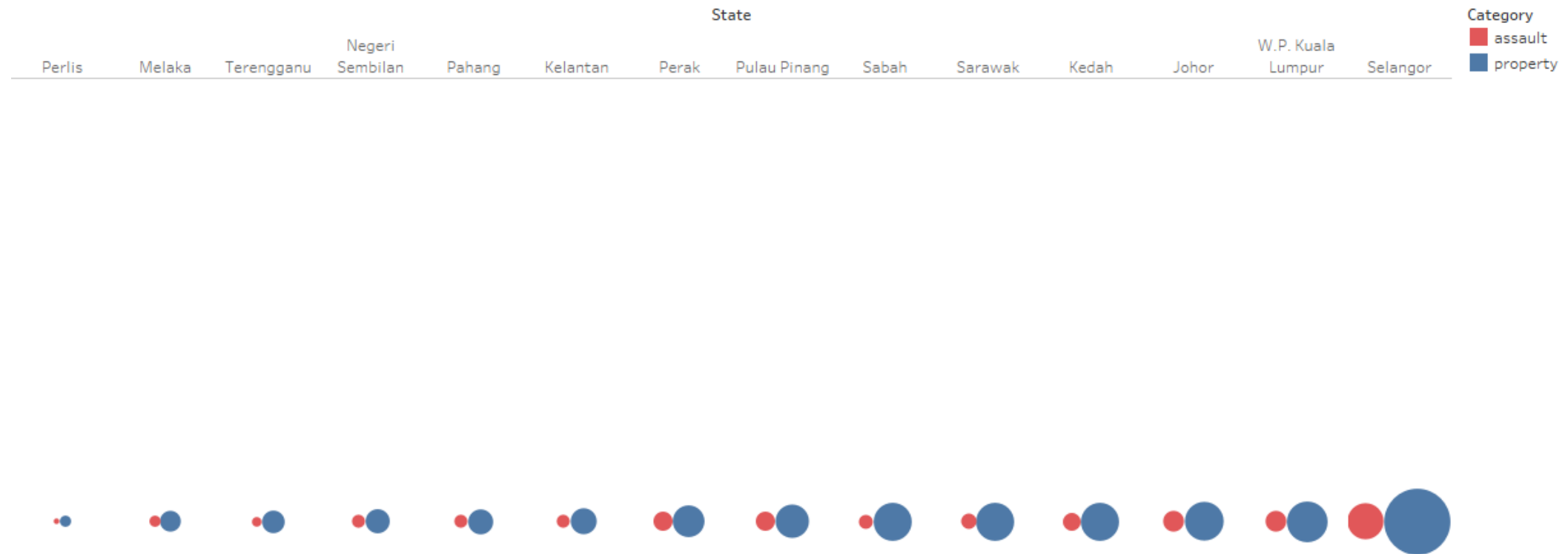# Crime Trends by State in Malaysia (2021-2023)

The trend of sum of Total Crimes for Year Year. Color shows details about State. The marks are labeled by State. The view is filtered on Year Year and State. The Year Year filter ranges from 2021 to 2023. The State filter keeps 14 members.

Top 10 Crime Rates Across Districts in Malaysia (2021–2023)

District

Year
- 2023
- 2022
- 2021

District	2021	2022	2023
Gombak	3,782	3,116	3,544

Gombak
Kajang
Petaling Jaya
Klang Selatan
Sentul
Dang Wangi
Ampang Jaya
Johor Bahru Selatan
Wangsa Maju
Melaka Tengah

Total Crimes

0   500   1000   1500   2000   2500   3000   3500   4000   4500   5000   5500   6000   6500   7000   7500   8000   8500   9000   9500   10000   10500
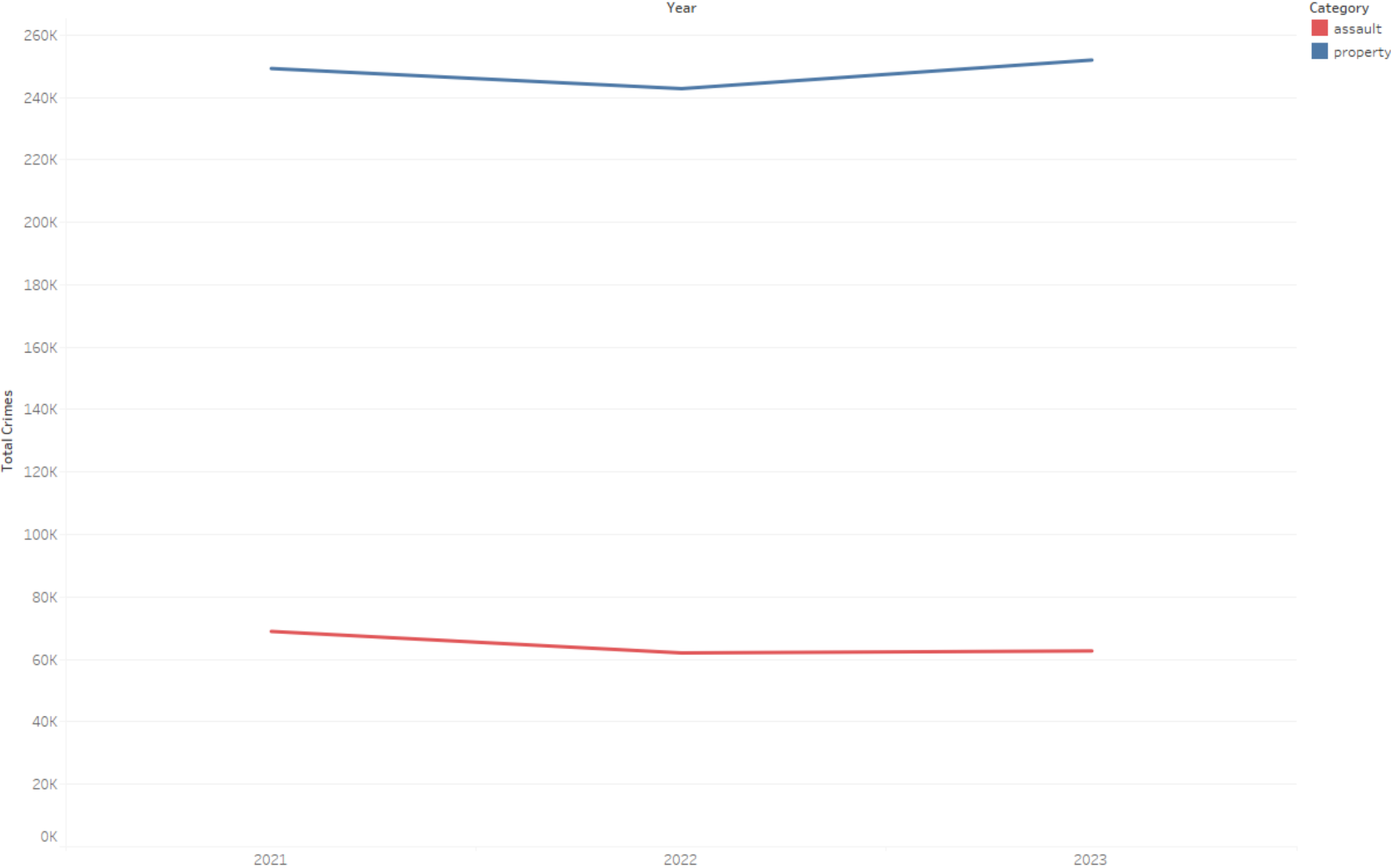
Sum of Total Crimes for each District. Color shows details about Year Year. The marks are labeled by sum of Total Crimes. The view is filtered on Year Year and District. The Year Year filter keeps 2021, 2022 and 2023. The District filter keeps 10 of 160 members.

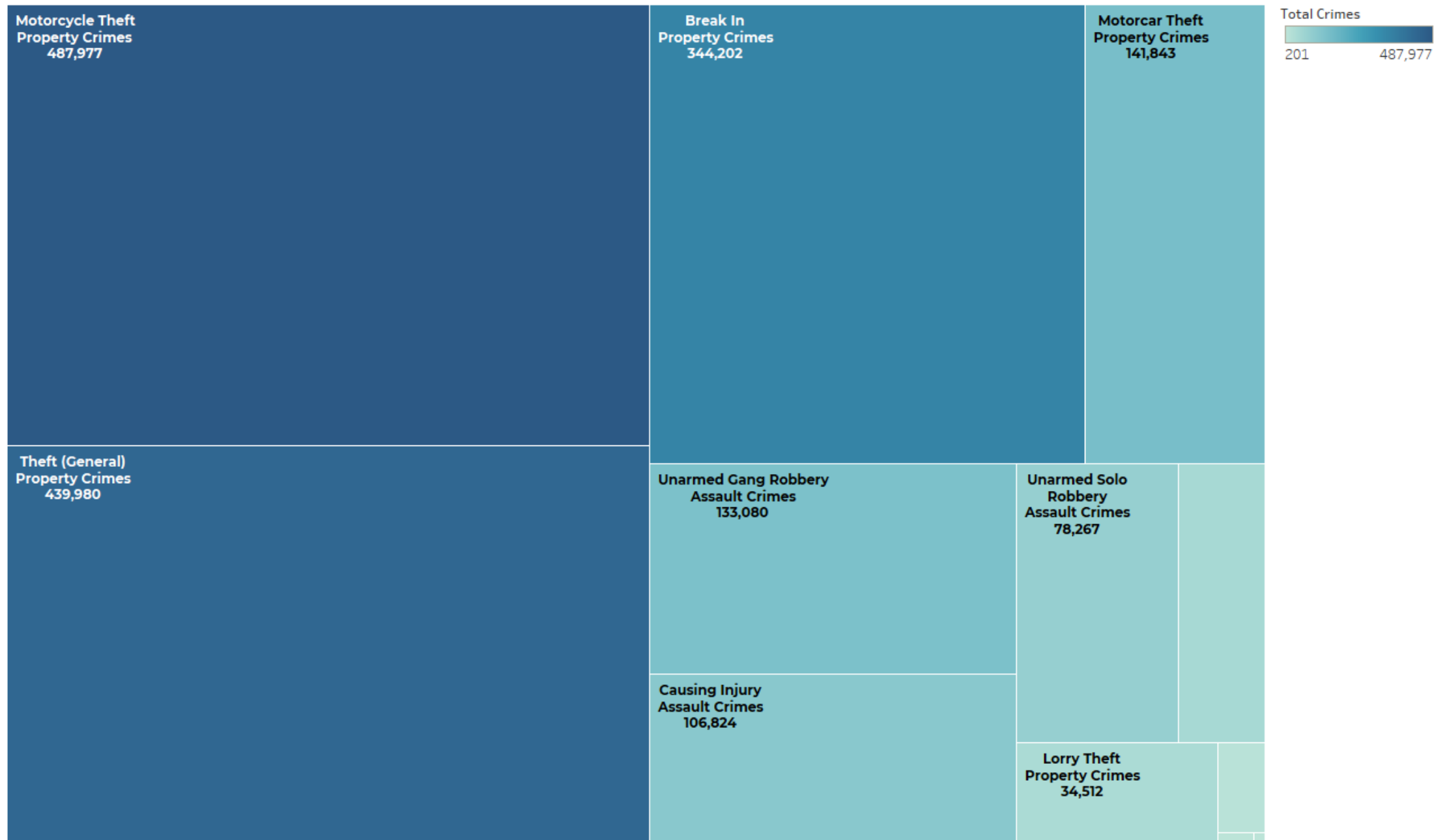# Total Crime Intensity Across Malaysian States (2021–2023)

Annual Trends in Assault vs. Property Crimes (2021–2023)

Year

Category
- assault
- property

Total Crimes

260K

240K

220K

200K

180K

160K

140K

120K

100K

80K

60K

40K

20K

0K

2021   2022   2023

The trend of sum of Total Crimes for Year Year. Color shows details about Category. The view is filtered on Year Year, which keeps 2021, 2022 and 2023.

Top Crime Sub-Categories in Malaysia (2021–2023)

Motorcycle Theft
Property Crimes
487,977

Break In
Property Crimes
344,202

Motorcar Theft
Property Crimes
141,843

Theft (General)
Property Crimes
439,980

Unarmed Gang Robbery
Assault Crimes
133,080

Unarmed Solo
Robbery
Assault Crimes
78,267

Causing Injury
Assault Crimes
106,824

Lorry Theft
Property Crimes
34,512

Total Crimes

201   487,977

Sub Category, Crime Category and sum of Total Crimes. Color shows sum of Total Crimes. Size shows sum of Total Crimes. The marks are labeled by Sub Category, Crime Category and sum of Total Crimes. The view is filtered on Sub Category, which excludes Total.

Objective 1: To analyze the annual crime trends in Malaysia between 2021 and 2023
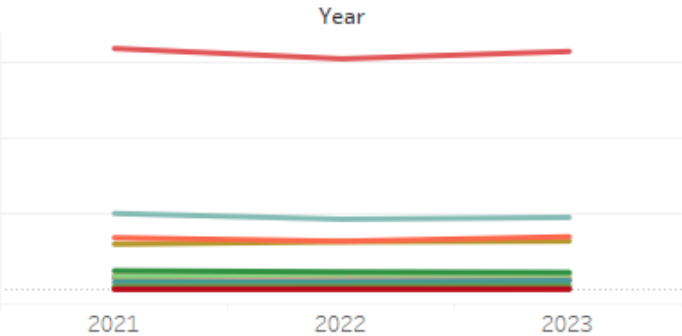
Overview

Total Crimes Reported (2021-2023):
Over 300,000 crimes were recorded across Malaysia between 2021 and 2023.

Most Common Crime Sub-Category:
Theft (General) are the most reported crime sub-categories during this period.

Top State by Crime:
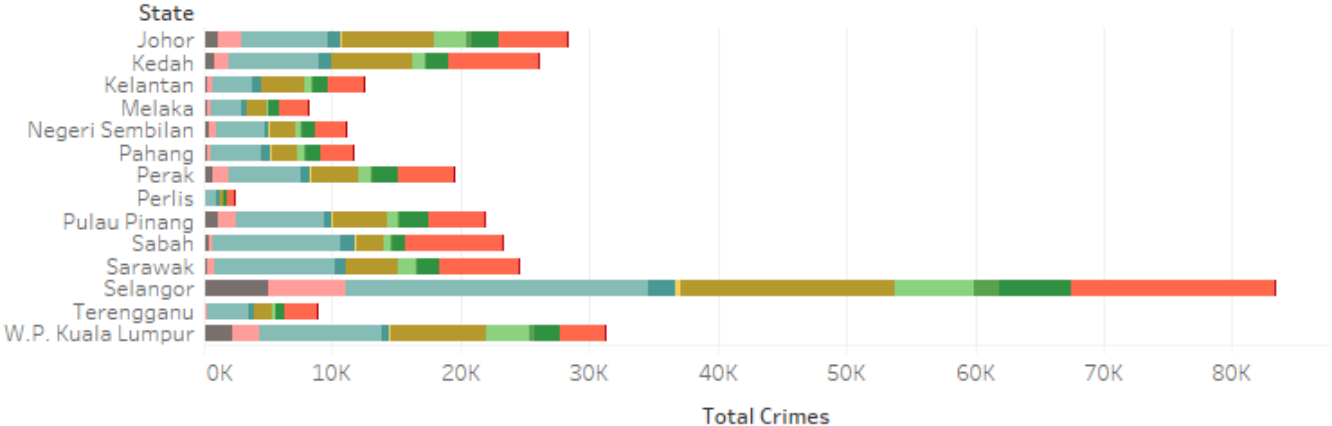Selangor consistently leads in total crimes reported, followed by W.P. Kuala Lumpur.

Sub Category
- Armed Gang Robbery
- Armed Solo Robbery
- Break In
- Causing Injury
- Lorry Theft
- Motorcar Theft
- Motorcycle Theft
- Murder
- Rape
- Theft (General)
- Total
- Unarmed Gang Robbery

Crime Trends Over Time

Year

While total crimes slightly declined in 2022, there was an increase in 2023, indicating fluctuating crime rates.

Crime Sub-Category Breakdown by State

Selangor reports the highest crime rate across most sub-categories, suggesting the need for focused law enforcement strategies in this region.
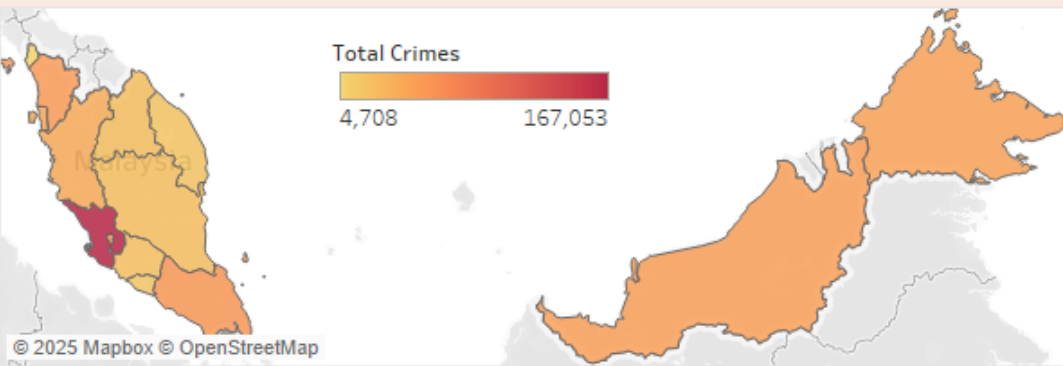
Objective 2: To identify crime hotspots and regional variations in crime patterns within Malaysia from 2021 to 2023
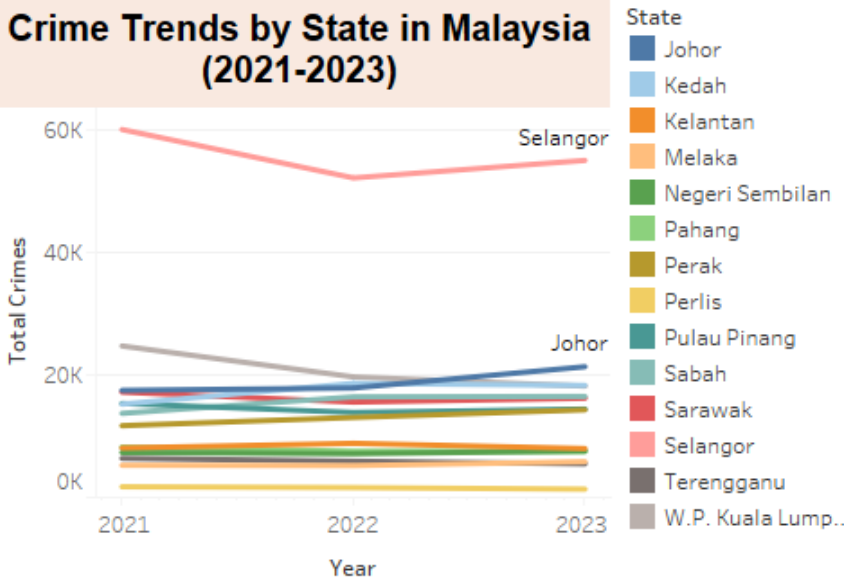
Overview

Geographic Distribution of Crime:
Selangor stands out as the state with the **highest** crime intensity, followed by W.P. Kuala Lumpur
Eastern states like **Kelantan** & **Terengganu** report relatively **lower** crime rates

Broader Regional Trends:
The **West Coast** of Peninsular Malaysia (e.g., Selangor, W.P. Kuala Lumpur) has significantly **higher** crime rates compared to the **East Coast**

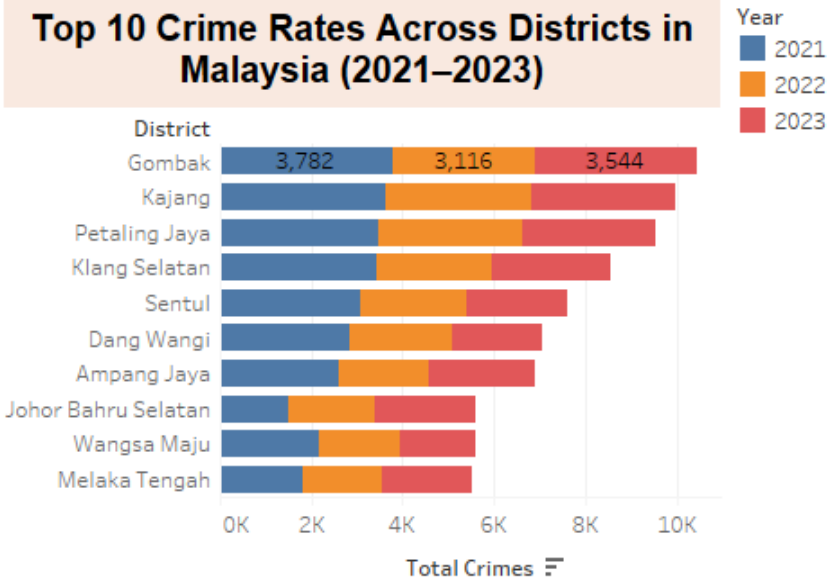## Crime Hotspots Across States in Malaysia (2021–2023)

Total Crimes
4,708 — 167,053

© 2025 Mapbox © OpenStreetMap

Crime Trends by State in Malaysia (2021-2023)

State
- Johor
- Kedah
- Kelantan
- Melaka
- Negeri Sembilan
- Pahang
- Perak
- Perlis
- Pulau Pinang
- Sabah
- Sarawak
- Selangor
- Terengganu
- W.P. Kuala Lump..

Selangor
Johor

Total Crimes: 60K, 40K, 20K, 0K
Year: 2021, 2022, 2023

Top 10 Crime Rates Across Districts in Malaysia (2021–2023)

Year
- 2021
- 2022
- 2023

District
- Gombak — 3,782 | 3,116 | 3,544
- Kajang
- Petaling Jaya
- Klang Selatan
- Sentul
- Dang Wangi
- Ampang Jaya
- Johor Bahru Selatan
- Wangsa Maju
- Melaka Tengah

Total Crimes: 0K, 2K, 4K, 6K, 8K, 10K

- **Selangor** remains the **highest** crime hotspot, with a **dip** in 2022 and a **resurgence** in 2023.
- **Kedah, Perlis,** and **Pulau Pinang** show **minimal** fluctuations, indicating stability.
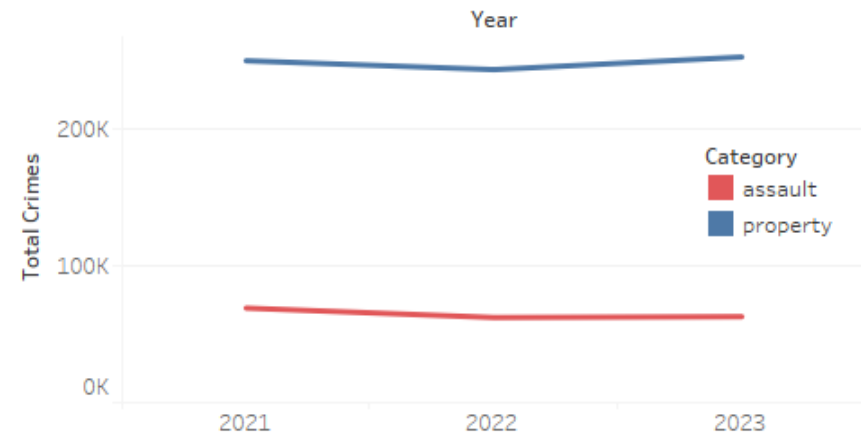- Crime rates in **W.P. Kuala Lumpur** remain **high** yet stable compared to **Selangor**.

- Five Selangor districts (**Gombak, Kajang, Petaling Jaya, Klang Selatan, Ampang Jaya**) dominate the top 10, with **Gombak** **leading** and **peaking** in 2023
- Three W.P. Kuala Lumpur (**Sentul, Dang Wangi,** and **Wangsa Maju**) significantly contribute to the top 10.
- **Kajang** and **Petaling Jaya** show steady growth, while **Klang Selatan** experiences a **sharp rise** in 2023.

Objective 3: To examine the relationship between different types of crime (assault vs property crimes) and their distribution across states in Malaysia
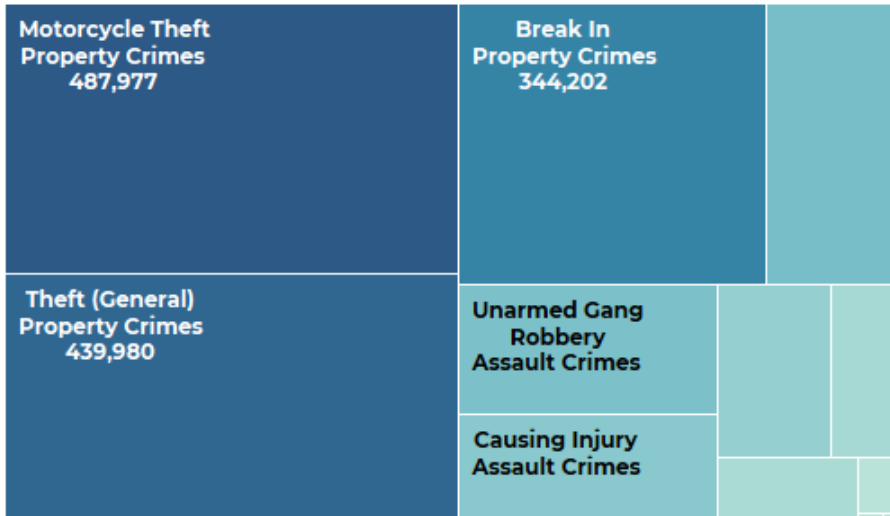
Annual Trends in Assault vs. Property Crimes

Year

Property crimes decreased by 12% in 2022 but rebounded in 2023, indicating possible impacts of law enforcement strategies or economic factors.
Assault crimes show stability over the years, with slight fluctuations indicating regional variations

The clear trend difference between the two crime categories suggests the need for differentiated resource allocation—prioritizing property crime prevention while maintaining focus on assault crime hotspots.
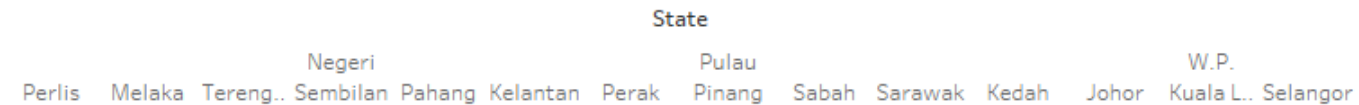
Breakdown of Crime Categories

Motorcycle Theft Property Crimes 487,977	Break In Property Crimes 344,202
Theft (General) Property Crimes 439,980	Unarmed Gang Robbery Assault Crimes
	Causing Injury Assault Crimes

With **487,977 incidents**, **motorcycle theft** emerges as the most significant sub-category of property crimes. This suggests that targeted measures, such as enhanced vehicle security and anti-theft campaigns, should be prioritized.

Within assault crimes: **Unarmed gang robbery** leads with **133,080 incidents**, highlighting the need for community policing and better surveillance in vulnerable areas.

Overview of Crime Intensity

State

| | | | Negeri | | | | Pulau | | | | W.P. | | |
| Perlis | Melaka | Tereng.. | Sembilan | Pahang | Kelantan | Perak | Pinang | Sabah | Sarawak | Kedah | Johor | Kuala L.. | Selangor |

References: Polis Diraja Malaysia (PDRM), Department of Statistics Malaysia (DOSM)

Selangor and Kuala Lumpur exhibit the largest crime volumes, driven predominantly by property crimes.
Smaller states like Perlis and Kelantan have significantly lower crime rates, indicating potential disparities in crime reporting or density-related factors
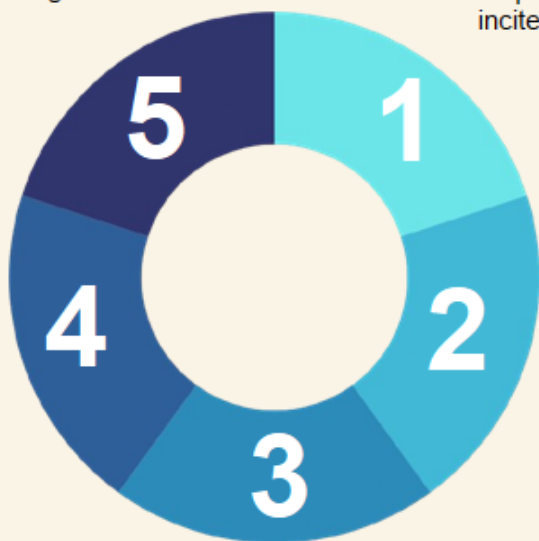
5 STEPS FOR CITIZENS TO FOLLOW

Adopt Crime Prevention Practices:

Secure personal property, such as using anti-theft devices for vehicles and reinforcing home security systems.Avoid high-risk areas at night and be vigilant in crowded public spaces.

Promote Inclusivity and Unity:

Encourage participation in community programs to reduce social isolation and build a sense of shared responsibility for safety.Report any activities that may incite violence or harm to local authorities.

Engage in Community Policing:

Volunteer for or support neighborhood watch programs to deter crimes in your area.Organize community events that promote safety and foster relationships with local law enforcement.

Educate and Advocate:

Teach children and family members about the importance of crime prevention and how to stay safe in public spaces.Advocate for community-driven initiatives, such as better lighting or CCTV installation in your neighborhood.

Actively Report Crimes:

Use available reporting tools like police hotlines or mobile apps for quick and anonymous crime reporting.Participate in community forums to share information about suspicious activities.

Strategic Initiatives for Crime Reduction by Authorities

1 **Enhance Law Enforcement:**

- Increase police presence and patrols in high-crime districts such as Gombak, Kajang, and Petaling Jaya.

- Implement community policing programs to build trust between law enforcement and citizens.

2 **Improve Crime Prevention Infrastructure:**

- Install additional CCTV cameras in public spaces and urban areas prone to theft and assault crimes.

- Upgrade street lighting and public transport security systems in areas like Selangor and Kuala Lumpur.

3 **Strengthen Legislation:**

- Introduce stricter penalties for repeat offenders, particularly for property crimes like motorcycle theft.

- Pass laws requiring the use of advanced anti-theft devices on motorcycles and other vehicles.

4 **Community Awareness Campaigns:**

- Launch nationwide campaigns to educate the public about crime prevention strategies, such as securing property and reporting crimes.

- Work with media platforms to share tips on avoiding theft and improving personal safety.

5 **Data-Driven Policy Making:**

- Leverage crime trend data to allocate resources and identify emerging crime hotspots.

- Collaborate with universities and research institutions to conduct periodic crime analysis for proactive measures.

CONCLUSION

Key Insights:

Selangor and W.P. Kuala Lumpur consistently report the highest crime rates, driven by property crimes like motorcycle theft. High-crime districts such as Gombak and Kajang require focused attention to reduce crime intensity and improve safety. While property crimes show fluctuations, assault crimes remain relatively stable, indicating a need for targeted community efforts.

Broader Implications:

Addressing crime in high-density urban areas will likely reduce national crime rates overall.Maintaining low crime rates in smaller states like Perlis and Kelant..

Future Focus:

Policy-makers and law enforcement agencies should adopt a data-driven approach to prioritize interventions in high-crime regions and categories.Collaboration with communities and stakeholders can amplify efforts to ensure long-term safety and security nationwide.

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TEAM LEADER

AHMAD ADLAN BIN ABDUL HALIM 2215775
TEAM MEMBER 1

MUHAMMAD IKMAL HAKIMI BIN ROSLI 2210827
TEAM MEMBER 2

MUHAMMAD IRFAN BIN ZAKARIA 2120199
TEAM MEMBER 3

INFO 4312 INFORMATION VISUALIZATION
SECTION 2
SEMESTER 1 24/25

CRIME EVOLUTION IN MALAYSIA (2021–2023)

Data-Driven Insights for Public Safety

Storyboard

PROBLEM STATEMENTS

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Urbanized regions like Selangor and Kuala Lumpur report higher crime rates, while specific districts show emerging trends.

Assault crimes (e.g., robbery, gang-related violence) and property crimes (e.g., vehicle theft, house break-ins) remain major concerns.

Storyboard

OBJECTIVES

Objective 1:

To analyze the annual crime trends in Malaysia between 2021 and 2023

Objective 2:

To identify crime hotspots and regional variations in crime patterns within Malaysia from 2021 to 2023

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Storyboard

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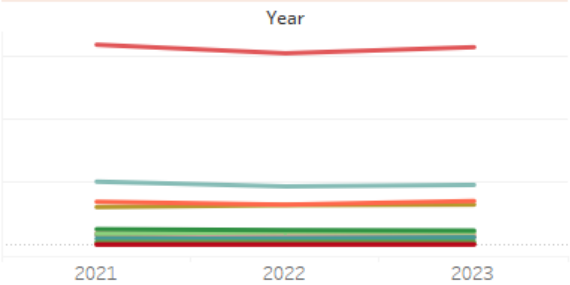
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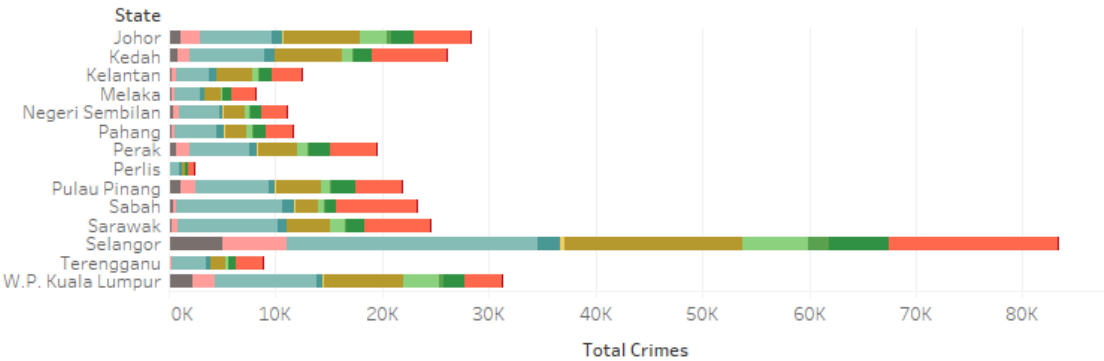
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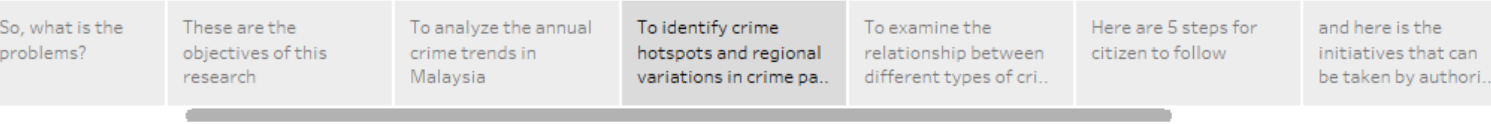
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While total crimes slightly declined in 2022, there was an increase in 2023, indicating fluctuating crime rates.

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State
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0K   10K   20K   30K   40K   50K   60K   70K   80K

Total Crimes

Selangor reports the highest crime rate across most sub-categories, suggesting the need for focused law enforcement strategies in this region.
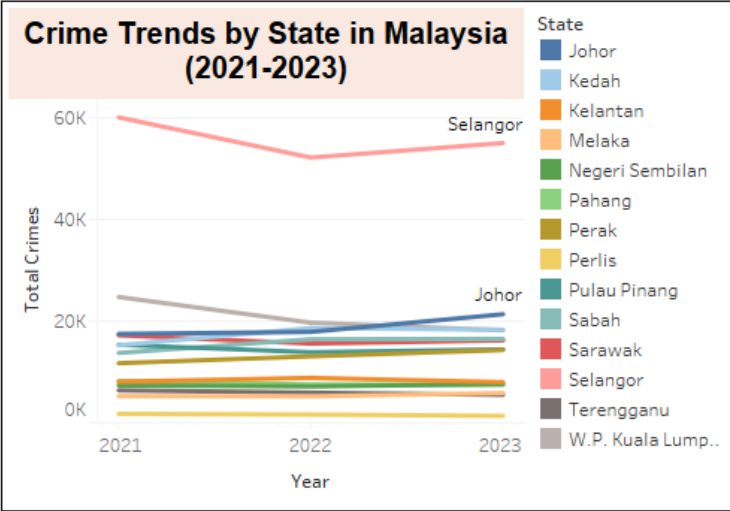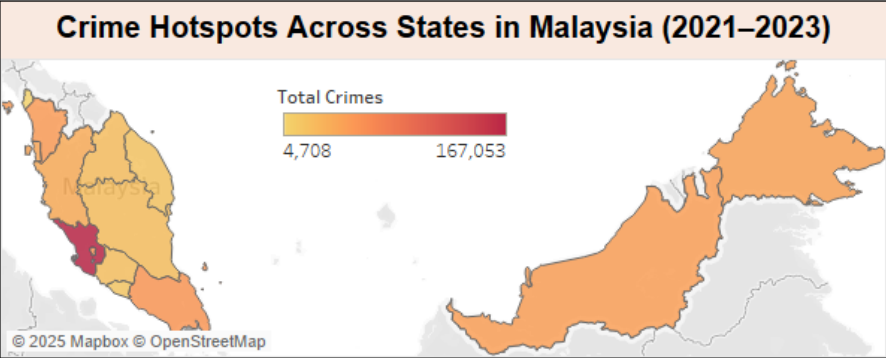
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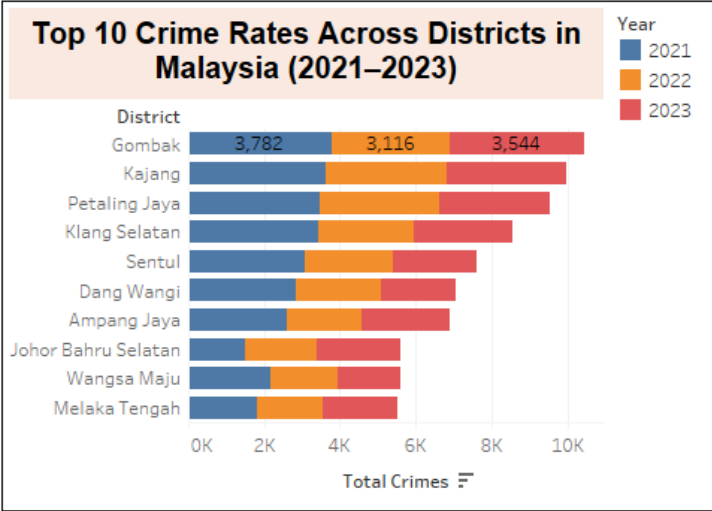
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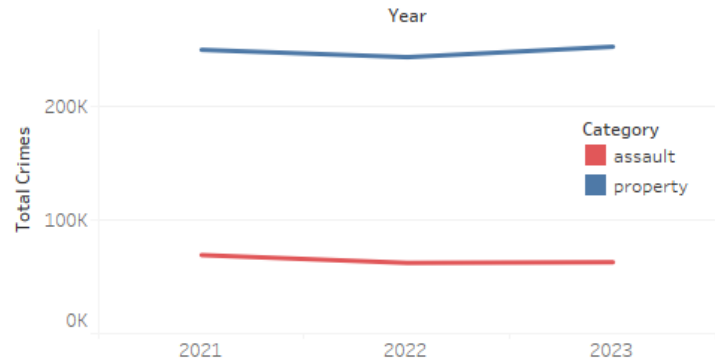
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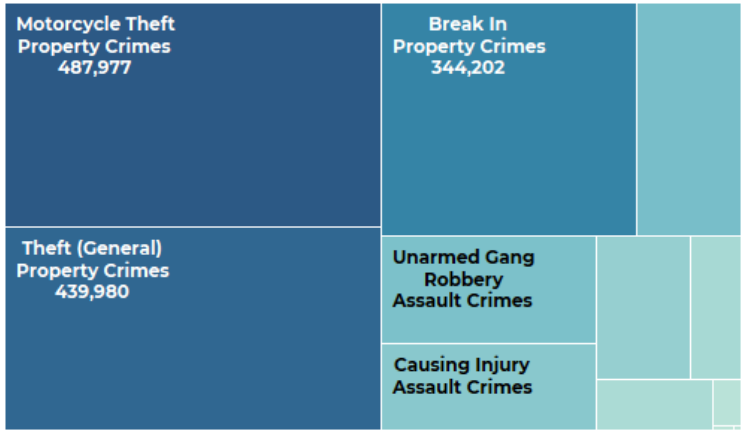
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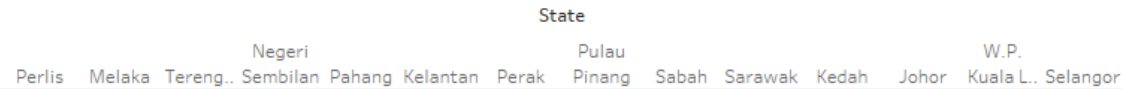
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Property Crimes
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Property Crimes
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Theft (General)
Property Crimes
439,980

Unarmed Gang
Robbery
Assault Crimes

Causing Injury
Assault Crimes

With **487,977 incidents**, motorcycle theft emerges as the most significant sub-category of property crimes. This suggests that targeted measures, such as enhanced vehicle security and anti-theft campaigns, should be prioritized.

Within assault crimes: **Unarmed gang robbery** leads with **133,080 incidents**, highlighting the need for community policing and better surveillance in vulnerable areas.

Overview of Crime Intensity

State

| Perlis | Melaka | Tereng.. | Negeri Sembilan | Pahang | Kelantan | Perak | Pulau Pinang | Sabah | Sarawak | Kedah | Johor | W.P. Kuala L.. | Selangor |

Selangor and Kuala Lumpur exhibit the largest crime volumes, driven predominantly by property crimes.
Smaller states like Perlis and Kelantan have significantly lower crime rates, indicating potential disparities in crime reporting or density-related factors

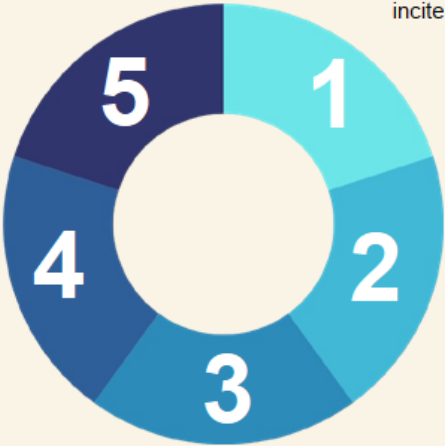References: Polis Diraja Malaysia (PDRM), Department of Statistics Malaysia (DOSM)

5 STEPS FOR CITIZENS TO FOLLOW

Adopt Crime Prevention Practices:

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Volunteer for or support neighborhood watch programs to deter crimes in your area.Organize community events that promote safety and foster relationships with local law enforcement.

Educate and Advocate:

Teach children and family members about the importance of crime prevention and how to stay safe in public spaces.Advocate for community-driven initiatives, such as better lighting or CCTV installation in your neighborhood.

Actively Report Crimes:

Use available reporting tools like police hotlines or mobile apps for quick and anonymous crime reporting.Participate in community forums to share information about suspicious activities.

5 1 2 3 4

Strategic Initiatives for Crime Reduction by Authorities

① Enhance Law Enforcement:

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- Implement community policing programs to build trust between law enforcement and citizens.

② Improve Crime Prevention Infrastructure:

- Install additional CCTV cameras in public spaces and urban areas prone to theft and assault crimes.

- Upgrade street lighting and public transport security systems in areas like Selangor and Kuala Lumpur.

③ Strengthen Legislation:

- Introduce stricter penalties for repeat offenders, particularly for property crimes like motorcycle theft.

- Pass laws requiring the use of advanced anti-theft devices on motorcycles and other vehicles.

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- Launch nationwide campaigns to educate the public about crime prevention strategies, such as securing property and reporting crimes.

- Work with media platforms to share tips on avoiding theft and improving personal safety.

⑤ Data-Driven Policy Making:

- Leverage crime trend data to allocate resources and identify emerging crime hotspots.

- Collaborate with universities and research institutions to conduct periodic crime analysis for proactive measures.

Storyboard

CONCLUSION

Key Insights:

Selangor and W.P. Kuala Lumpur consistently report the highest crime rates, driven by property crimes like motorcycle theft. High-crime districts such as Gombak and Kajang require focused attention to reduce crime intensity and improve safety. While property crimes show fluctuations, assault crimes remain relatively stable, indicating a need for targeted community efforts.

Broader Implications:

Addressing crime in high-density urban areas will likely reduce national crime rates overall.Maintaining low crime rates in smaller states like Perlis and Kelant..

Future Focus:

Policy-makers and law enforcement agencies should adopt a data-driven approach to prioritize interventions in high-crime regions and categories.Collaboration with communities and stakeholders can amplify efforts to ensure long-term safety and security nationwide.

Storyboard

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