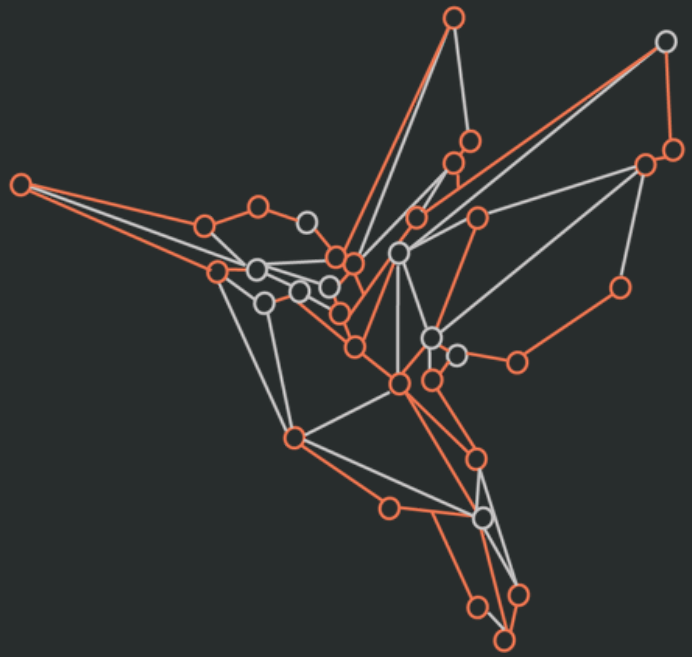

DATA 2.0:
Sustainahack X DBS

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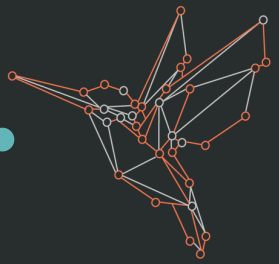

Timeline

09:30-10:00: Opening and Project Release

10:00-18:00: Hack

18:00-19:00: Travel to Yale-NUS Performance Hall

18:00-19:00: Dinner and Networking

19:00-20:30: Presentation and Judging

20:30-21:00: Awards and Closing Ceremony

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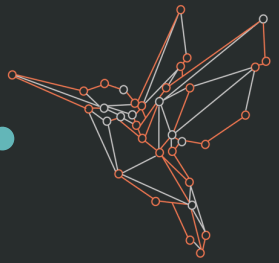

Rules

1. Team Sizes: Minimum 1 / Maximum 5
    a. We recommend 4 per group as prizes have been procured with this in mind
2. Presentations: 5 minutes (submit presentations by 6PM)
3. Don't eat in the auditorium
4. Credit ALL code you take inspiration from!

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Challenge Statements

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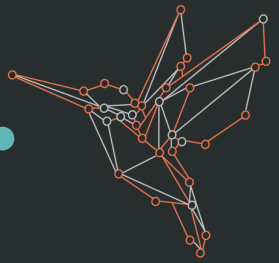

Air Pollution

Air pollution is known to kill 7 million people around the world per year. Singapore has recently struggled with air pollution as well. In 2015, she faced record level PSI levels. In this theme, we'd like to investigate the effect of air pollution on different socioeconomic indicators.

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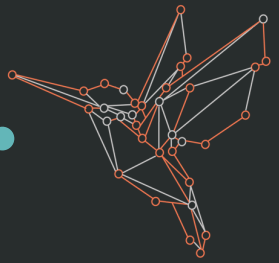

Air Pollution

1. Effects of pollution on infant mortality
2. Effect of air pollution on crime rates per capita
3. Effect of air pollution on tourism in Singapore and in South East Asia
4. Effect of air pollution on expenditure
5. Effect of expenditure on air pollution

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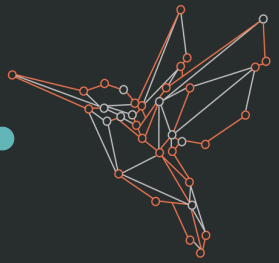

Water

Increasing water scarcity is a growing threat to a sustainable future. Billions of people around the world lack access safe drinking water. Singapore draws more than half of its water needs from the Johor River in Malaysia. In this theme we'd like to use data to help understand how to better use water to prevent geopolitical conflict and her neighbour.

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Water

1. Water usage by neighborhood
2. Water usage by temperature
3. Water usage and tourism

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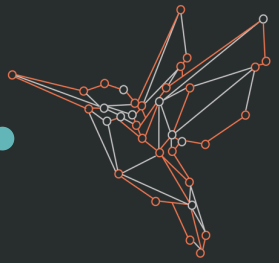

Transportation

The transportation is sector is responsible for roughly 20% of the world's GHG emissions. The Singaporean government has made sustained efforts to try to regulate it's growing car population and encourage public transport usage in light of it's clampdown on COE. In this theme, we'd like to investigate the relationship between transport, pollution and economic activity.

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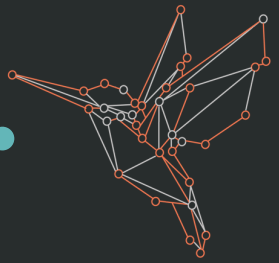

Transportation

1. What are the effects of air pollution on public transport ridership?
2. Relationship between COE/Public transport ridership
3. Public transportation/COE and credit card transactions

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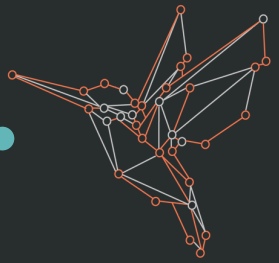

Energy & Climate

The availability of electricity is a cornerstone of modern civilisation. Over a billion people lack access to electricity. Can we better understand energy consumption and its effect on the environment and society?

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Energy & Climate

1. Does energy use increase when temperatures increase?
2. How does temperature affect infant mortality / deaths?
3. Energy consumption and air pollution

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Judging Criteria

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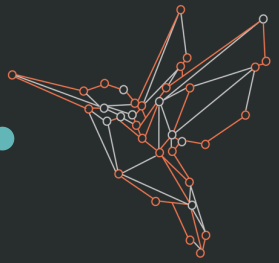

Creativity

1. How original was the research question/hypothesis?
2. Was the research question/hypothesis innovative? 'Hmm?' criteria - did it make you go 'Hmm?'
3. Was the approach to answering the research question/hypothesis innovative?
4. Were datasets joined in creative ways?

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Sustainability

1. How much did the project have to do with sustainability?
2. How relevant was the project to sustainability issues in Singapore?
3. Could these results be used to help benefit sustainability goals in Singapore?

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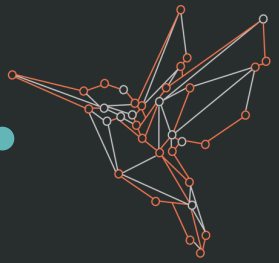

Statistical Robustness

1. Did the project have a clear hypothesis/research question before beginning?
2. Were key statistical assumptions checked before conclusions were drawn?
3. Did the project correctly identify causal relationships between features?

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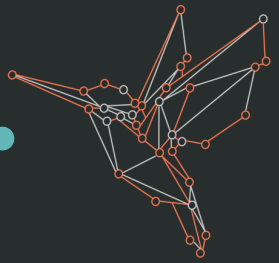

Communication

1. Was the presentation understandable to a general audience?
2. Was the presentation interesting/did the presenters tell a good story?

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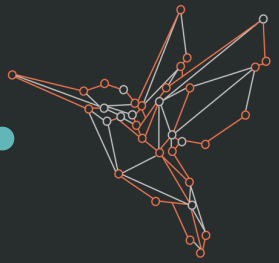

Visualizations

1. How aesthetically pleasing were the visualisations?
2. Tweetability - does the visualisation stand on its own as an interesting and captivating visualisation?
3. Were plots and axes correctly labelled?
4. Were the visualisations easy to understand?

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Data Usage

1. How was the data manipulated/cleaned?
2. How much data was used?
3. Were new features/insights extracted? Was new data created?

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Data

https://tinyurl.com/yncdatasets

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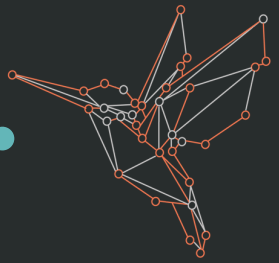

Project Submission

1. Submit your presentations to hello@yncdata.com by 6PM
2. Title your presentations your group's name (your_group_name.pptx)

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