



# Data analysis on community PM<sub>2.5</sub> hot-spot identification and quantification (Exam 2)

---

SC Candice Lung & WC Vincent Wang

ADVANCED INSTITUTE ON Hi-ASAP (2020)  
ACADEMIA SINICA, TAIWAN

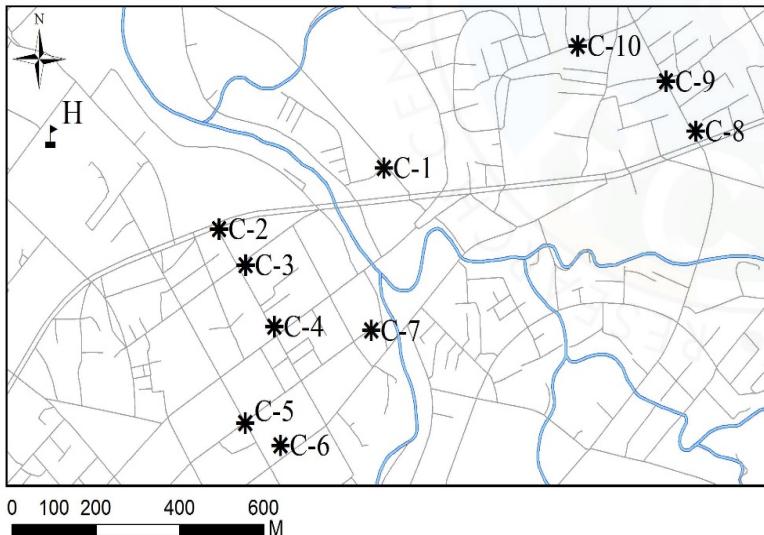
# Exam 2 (1/3)

- 1. Input data:** Hi-ASAP\_exam2.csv
- 2. Ten street-level sites monitor air pollution sources as the table.**
- 3. Some pollution sources have specific business hours as follows:**

Market: 10 am - 8 pm (including 8 pm)

Vendor: 1 pm – 9 pm (including 9 pm)

Gas station: 8 am – 7 pm (including 7 pm)



Site	Pollution sources
C-1	School, traffic type 1
C-2	Traffic type 1
C-3	Market, traffic type 1
C-4	Gas station, traffic type 1
C-5	Vendor, traffic type 1
C-6	Temple, traffic type 2
C-7	Street background
C-8	Traffic type 2
C-9	Temple, traffic type 2
C-10	Temple, traffic type 2

Traffic type 1: Traffic with passing-by vehicles

Traffic type 2: Stop-and-go traffic (stop near the traffic light)

# Exam 2\_output (2/3)

1. List the p-value of the overall regression model.
2. List the adjusted R<sup>2</sup> of the overall regression model.
3. List the contribution of the market.
4. List the contribution of the gas station.
5. Fill the answers in the file of exam2\_answers\_[team name].xlsx

Please follow the file naming rule. For example, the Taiwan team's file name is "exam2\_answers\_taiwan.xlsx"

A	B
Exam 2	Answer
List the p-value of the overall regression model.	<input type="text"/>
List the adjusted R <sup>2</sup> of the overall regression model.	<input type="text"/>
List the contribution of the market.	<input type="text"/>
List the contribution of the gas station.	<input type="text"/>

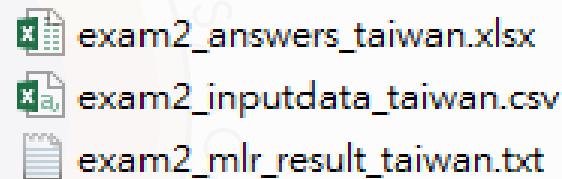
# Exam 2\_output (3/3)

6. Email three result files to Mr. Liu ( [lh0909@gate.sinica.edu.tw](mailto:lh0909@gate.sinica.edu.tw) ), which are the answers to exam 2, the regression result, and input data including the established dummy variables.
7. Please follow the file naming rules:

exam2\_answers\_[team name].xlsx

exam2\_inputdata\_[team name].csv

exam2\_mlr\_result\_[team name].txt



# Thank you for your participation!