

Programming Cheat Sheet



Presented by:

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1. Deliverables

Stage 1

- Must define your Metric
- Implement Metric
- Visualize the resulting data (heatmap, surface graph, table of data, etc.)

Stage 2

- Define the at-risk criteria
- Determine what Key Locations are most at-risk
- Visualization of the Key Locations and how at-risk they are

Stage 3

- Allocate Fire Fighting resources
- Every Key Location must have at least 1 Fire Fighting resource
- Define which Fire Station is allocated to what Key Location.

2. Detailed Information

Table 1: Data sets with more information.

Filename	Type	Description	Variable	Units
average_predic_temp.csv	Double	Temperature predictions	A_{temp}	°C
average_rainfall.csv	Double	Average rainfall in an area	A_{rain}	mm/km ²
map_water.csv	Integer	Location of water in the map	M_{water}	---
unit_firework_sales.csv	Integer	Number of fireworks purchased in past year	$U_{firework}$	# Of fireworks

average_foliage_density.csv	Double	Density of foliage/forests	$A_{foliage}$	% Of area covered by foliage
average_pop_density.csv	Double	Density of population	A_{pop}	People/km ²
unit_camping_traffic.csv	Integer	Annual camping traffic	U_{camp}	# Of Campers Per Year
unit_arson_report.csv	Integer	Frequency of Arson related crimes	U_{arson}	# Of Reports per Year
Key_Site_Locations.csv	Integer	Key locations	---	---
Fire_Station_Locations.csv	Character	Fire station locations	---	---

Table 2: Key Locations, names, corresponding ID Value and the type of location.

Key Location	ID Value	Type
Saint John	2	City
Moncton	3	City
Fredericton	4	City
Miramichi	5	City
Bathurst	6	City
Mactaquac	7	Park
Mount Carleton	8	Park
Parlee Beach	9	Park
Kouchibouguac	10	Park
Fundy	11	Park
Gagetown	12	Military Base

Table 3: Fire Station Information.

Fire Station Type	Radius (km)	Information	Conditions
Type A	200	Water Plane	Requires water access within 50km
Type B	120	Fire Truck	Function only in cities or towns (Fire hydrant access)
Type C	80	ATV	---