Harbourfront Volunteer Program

BUS 4045: Capstone Project, Client Sponsor: Karen Sinotte

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About Alexei

- *2006-2013 Manager of CRM at Bayer Healthcare*

- *MBA in The Hague Netherlands*

- *Salesforce Certified*

- *Always enjoyed hands on Analytics*

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Harbourfront Centre

1) ***Harbourfront Centre is an Arts & Cultural non-profit organization established in 1972***
   - Over 4,000 events annually
   - 16 million visitors each year
   - Over 7,000 volunteer shifts

2) ***Over 450 Volunteers Annually***

3) ***Diverse group of Volunteers – different ethnicities, ages, and professions***

Executive Summary

- *What's a Typical Volunteer?*

- *What correlates with Hours and Tenure?*

- *Examined all 2015 Volunteers*
  - *Used Tableau, T-Tests and SAS Data Miner*

- *Most Volunteers Toronto Female Students (U of T)*

- *Older Non Students ~ Work Longer Hours and >Tenure*

- *Distance ~ Fewer Hours*

- *Four Clusters Found ~ Made Recommendations*

Problem and Approach

- *Problem ~ Onboarding Costly ~ Who are our Volunteers?*

- *What correlates with Hours and Tenure?*

- *Examined all 2015 Volunteers*

- *Tableau used to Visualize*

- *T-Tests to Find Differences (M vs F, Young vs Old, etc)*
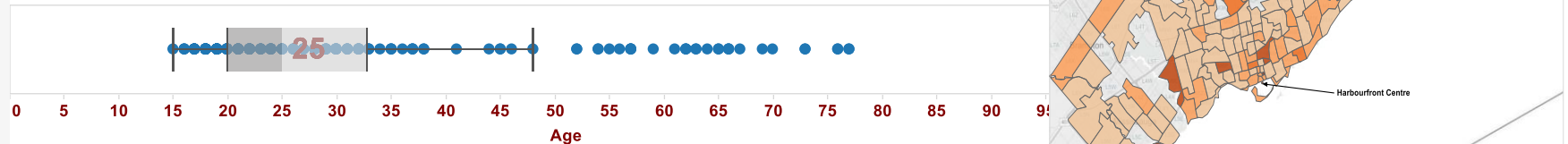
- *SAS Data Miner to Segment Volunteers*
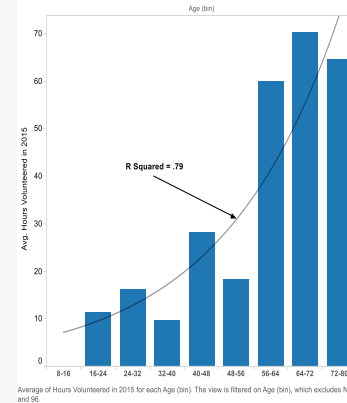
Results: Volunteer Profile

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- *Most are Female (70%)*

- *Most are Students ~ U of T*

- *Mean Age is 25 ~ skewed right*

- *Geo Map hints Distance is a factor*
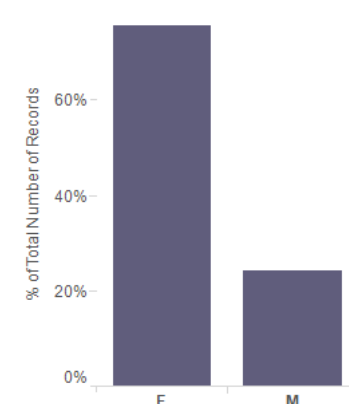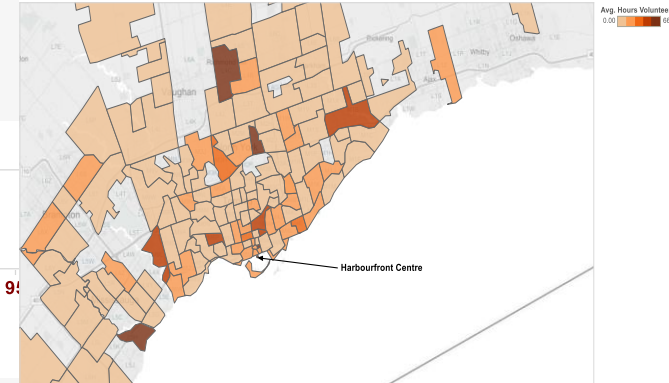
- *Age seems to relate to Hours and Tenure*

Age Group vs Avg Hours

R Squared = .79

Average of Hours Volunteered in 2015 for each Age (bin). The view is filtered on Age (bin), which excludes Null and 96.

Gender

Avg. Hours Volunteered

Harbourfront Centre

Map based on Longitude (generated) and Latitude (generated). Color shows average of Hours Volunteered in 2015. Details are shown for FSA. The data is filtered on Gender, which keeps F and M. The view is filtered on FSA, which excludes P7B.

Age Dist

25

0   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95

Age

Age.

Results: T-Tests

Hours Volunteered

Mean		P-Value	Significant?
Male	Female		
14.90	14.27	0.811	
English	Other		
13.63	19.01	0.047	✔
Non-Student	Student		
20.34	8.90	0.000	✔
Age >=30	Age < 30		
32.50	12.87	0.004	✔
< 2KM	> 2 KM		
18.41	13.62	0.049	✔

Tenure

Mean		P-Value	Significant?
Male	Female		
1.87	1.67	0.242	
English	Other		
1.64	2.39	0.004	✔
Non-Student	Student		
2.28	1.27	0.000	✔
Age >=30	Age < 30		
1.83	1.33	0.000	✔
< 2KM	> 2 KM		
1.95	1.73	0.235	

Results: Cluster Analysis

1. **Young Students Female**
2. **Young Males, mostly not students**
3. **Old Males Not Students**
4. **Middle Age Females – about 41% students**

Mean Statistics

Segment Id	Frequency of Cluster	Age	Student	Distance	Gender
1	380	21.07595	0.95	17.74256	-6.1E-16
2	178	24.25926	0.382022	19.04781	1
3	277	57.9	0.072202	3.398303	1
4	355	38.22449	0.405634	5.523051	8.05E-16

Segment Size

Results: Cluster Analysis

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Conclusions & Recommendations

- *Most Young Students yet work fewer hours*

- *Encourage Elderly Volunteers –*
  - Local Retirement Homes

- *Examine Student Credit Policy*
  - Many Students once complete do not return

- *What Motivates Segments? No one size fits all.*

- *"We miss you" ~ keep them in the loop*

Thank you!

Contact us: **Alexei.Marcilio@gmail.com**

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