TechTown Place-Based Alumni Data Report

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I. Introduction

Through the 37 place-based alumni that responded to the distributed survey questions, we were able to visualize and analyze the needs and characteristics that place-based alumni tend to demonstrate. This report will highlight key findings and the results of our data analysis in a presentable, accessible manner. We will then explain what our calculations mean and how they apply to TechTown's future programming. To finalize the report, specific recommendations will be formulated such that TechTown can adjust to better suit the needs and preferences of these alumni.

II. Methodology Overview - Conditional Probability

Conditional probability, notated as P(A|B), refers to the probability of an event A happening given that another event B has already occurred. The calculation of this is given by P(A|B) = P(A∩B)/P(B), where P(A∩B) is the probability of events A and B occurring simultaneously.

This calculation was integral to our data as it highlighted the needs of specific groups of alumni. By setting event B to be an arbitrary TechTown affiliation that alumni can have, it is possible to examine the preferences of people with this affiliation. For instance, if event B was participation in SWOT City and event A was "Attending an Event," P(A|B) simply is the percentage of SWOT City alumni that would be interested in attending an event. By having these probabilities, recommendations could be tailored to fit the needs of each affiliation.

In the probability plot, the horizontal labels A and B indicate each group of alumni, and the vertical labels C and D are the options in each question. The number in each block is the percentage of the group in its X-axis choosing the option in its Y-axis. The warmer the block is colored, the higher the probability is. For example, the upper left block in the graph below means that 60% of group A chose option C.
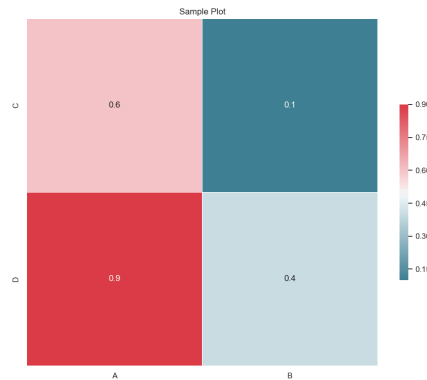

III. Analysis Approach

1. Data downloaded from Gravity Form as a PDF format was manually entered into Excel and saved in a comma separated value file
2. Data was cleaned in Python utilizing the pandas dataframe library
3. Occurrences of responses to each survey question were counted, percentages of these were calculated (out of all 37 respondents), and bar graphs were constructed
4. Conditional probabilities given affiliations were calculated for each survey question, and matrices were constructed to visualize probabilities

IV.   Data Analysis and Recommendations

### *How are alumni affiliated to TechTown?*

The two main categories respondents were affiliated to are Retail Boot Camp alumni (89.19%) and SWOT city alumni (70.27%). The other four categories that alumni simultaneously classified themselves as were SHOP participants (22.00%), Workshop attendees (32.43%), Group Technical Assistance alumni (2.70%), and professional service providers (12.51%).

AFFILIATION WITH TECHTOWN DETROIT
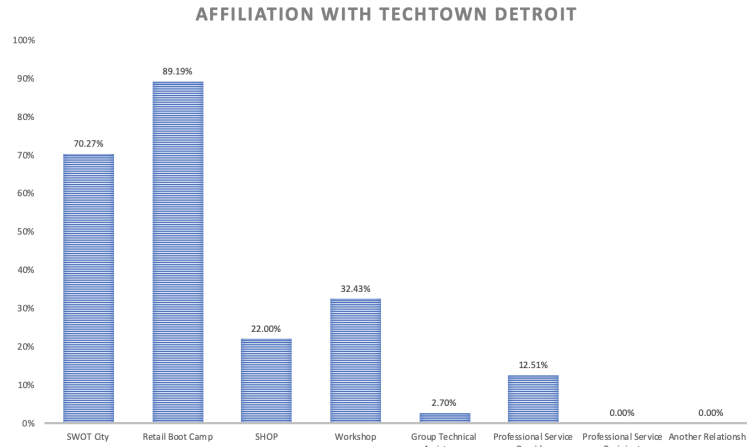
Through observing the blocks with probability marked as 1 in the matrix below, it can be determined that all SHOP, Workshop, and Group TA alumni were also part of Retail Boot Camp. Furthermore, all Group TA alumni and professional service providers who responded were SWOT City participants.

This shows that all respondents participated in Retail Boot Camp or SWOT City. In terms of SWOT City and Retail Boot Camp, it was common for a respondent to be an alum of both programs (85% SWOT City alumni participated in Retail Boot Camp, and 67% of Retail Boot Camp alumni participated in SWOT City).

However, since there was only one Group TA alum, any data provided by that one data point would not yield any conclusive results and can thus be ignored.

P(Y|X)
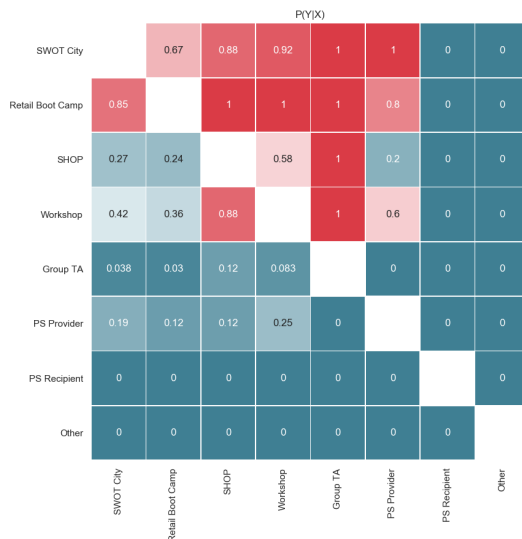
Recommendations

- SWOT City and Retail Boot Camp are the most popular options and are highly correlated

- Market the two programs' individual participants to the other program will likely be more effective

- SHOP participants are often Workshop attendees (88%)

- Keep all SHOP participants updated about upcoming workshops will encourage their continuing engagement with TechTown

What does it mean to be a TechTown alum?

From the survey results, we can conclude that place-based alumni generally most care about upcoming programs (86.49%), new initiatives (78.38%), networking with other entrepreneurs (78.38%), and specialized education (72.97%).

MEANING OF BEING AN ALUMNI
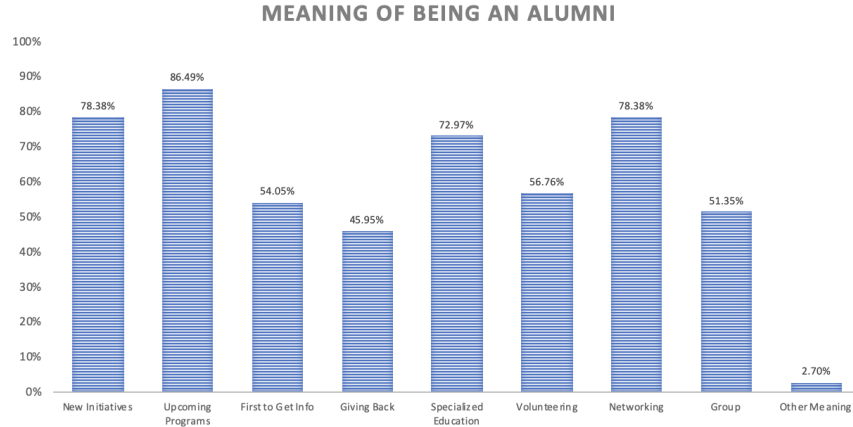
Such trends hold for the two most populated affiliations - SWOT City and Retail Boot Camp. Among these four options, SHOP participants tend to incline less to new initiatives (62%), but more toward being the first to receive information (75%). They also tend to care the most about volunteering at TechTown compared to other groups of alumni. Workshop attendees feel most strongly about upcoming programs (75%) and networking with other alumni (67%), and do not care so much for the other meanings (8.3%). Professional service providers are most passionate about new initiatives (80%), upcoming programs (80%), and networking (60%). For the other meanings, they are among the least interested (40%).

P(Y|X)

Recommendations

Upcoming programs and new initiatives
- Promote opportunities more often through staff, newsletter, social media or other possible ways

Networking with other entrepreneurs
- Publicize social events/workshops
- Set up social media groups (Facebook, LinkedIn, Slack)
- Build an alumni directory with businesses (only available to alumni)

Specialized education
- Offer specific workshops for alums with similar needs, could be integrated into part of the focus group

In general, place-based alumni tend to prefer hearing more about TechTown resources (78.38%), pop-up and vending opportunities (72.97%), and available partner resources (64.86%).

TOPICS INTERESTED IN HEARING ABOUT
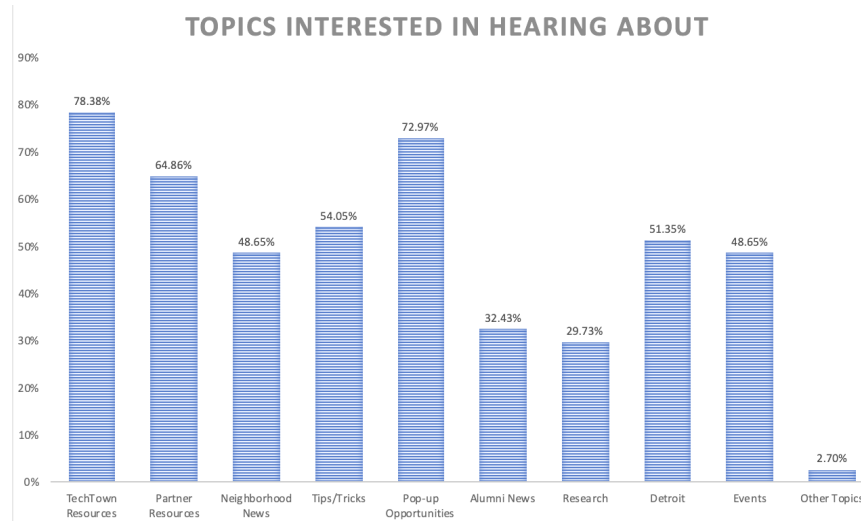
This tendency holds for alumni of all programs. Besides, The past SHOP participants surveyed are also highly interested in tips and tricks (75%), attending events (62%), and neighborhood news (62%). Workshop attendees (67% for tips and tricks and attending events, 58% for neighborhood news) generally have the same interest as SHOP participants. Professional service providers tend to have more interest in tips and tricks and attending events (60% for both), but less for neighborhood news (40%).

P(Y|X)

	SWOT City	Retail Boot Camp	SHOP	Workshop	Group TA	PS Provider	PS Recipient	Other
TechTown Resources	0.73	0.79	0.88	0.83	0	1	0	0
Partner Resources	0.58	0.64	0.62	0.67	0	0.6	0	0
Neighborhood News	0.54	0.48	0.62	0.58	0	0.4	0	0
Tips/Tricks	0.54	0.52	0.75	0.67	0	0.6	0	0
Pop-up Opportunities	0.69	0.79	1	0.83	1	0.6	0	0
Alumni News	0.35	0.33	0.5	0.5	0	0	0	0
Research	0.27	0.3	0.25	0.42	0	0	0	0
Detroit	0.54	0.55	0.5	0.5	0	0.4	0	0
Events	0.62	0.52	0.62	0.67	0	0.6	0	0
Other Topic	0	0.03	0	0	0	0	0	0

Recommendations

TechTown resources
- Add a link to an event calendar full of workshops and resources to the newsletter
- Promote resources available to alumni in social media groups (Facebook, LinkedIn)
- Include more links in the newsletter to relevant forms

Pop-up and vending opportunities
- Advertise the available pop-up opportunities for the alumni
- Create more pop-up and vending opportunities for alumni, considering the high demand for them

Available partner resources
- Advertise resources to be shared in each newsletter
- Create posts that encourage the sharing of resources for alumni through social media
- Make these resources available for people in the PSN as well, given the high demand for accessing the PSN

What initiatives do alumni wish to participate in?

The place-based alumni surveyed show overwhelming interest in attending workshops (91.89%), attending events (83.78%), accessing the professional service network (86.49%) and receiving one-on-one support (83.78%). There is also a slight interest in reading to stay informed (64.86%).

PARTICIPATE IN ALUMNI INITIATIVES
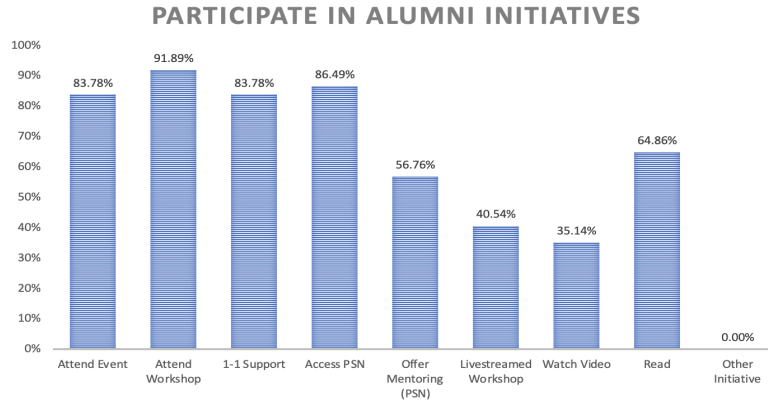
These trends generally stay constant among different groups of alumni. Besides, SHOP participants and workshop attendees also have a relatively moderate interest in offering mentoring through the PSN (88% and 83% respectively). Professional service providers are less keen on attending an event or reading to stay informed, but are still interested (both 60%). Most notably, all SHOP participants, workshop attendees, group TA and professional service providers demonstrated an interest in attending an alumni workshop.

P(Y|X)

	SWOT City	Retail Boot Camp	SHOP	Workshop	Group TA	PS Provider	PS Recipient	Other
Attend Event	0.77	0.88	0.88	0.83	1	0.6	0	0
Attend Workshop	0.88	0.97	1	1	1	1	0	0
1-1 Support	0.81	0.82	0.75	0.83	0	1	0	0
Access PSN	0.85	0.85	0.88	0.83	0	1	0	0
Offer Mentoring (PSN)	0.5	0.52	0.62	0.58	1	0.2	0	0
Livestreamed Workshop	0.31	0.42	0.25	0.25	0	0.2	0	0
Watch Video	0.19	0.39	0.25	0.25	0	0	0	0
Read	0.62	0.67	0.75	0.67	0	0.6	0	0
Other Initiative	0	0	0	0	0	0	0	0

Recommendations

Host alumni-only workshop

1 on 1 mentoring
- Provide appointment slots specifically for alumni
- Publicize 'Ask An Expert' or similar opportunities to alumni

PSN
- Advertise the application process better focusing on the benefits people could gain out of the program
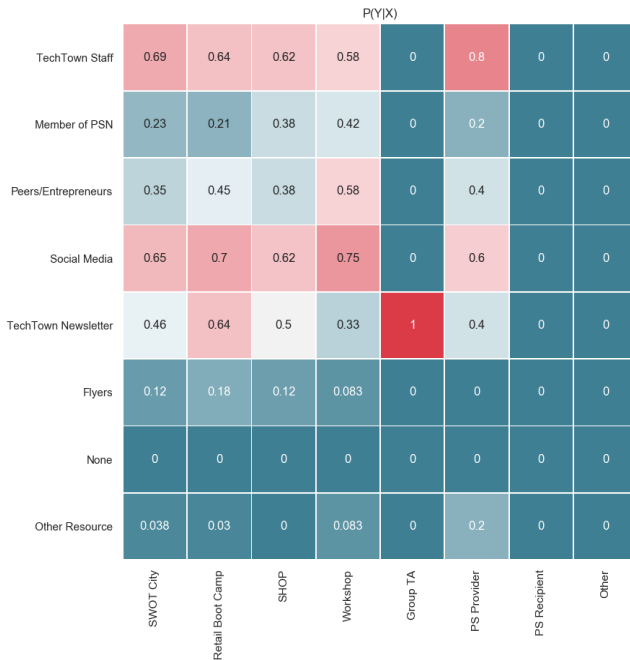
Reading to Stay Informed
- Expand newsletter to send out regularly and more frequently
- Feature multiple alumni in newsletter for them to share stories or market their own businesses
- Send newsletter material and subscribe link through various electronic media

The most accessible platform for alumni to learn about TechTown events/resources now are TechTown staff (67.57%) and social media (67.57%). From this result, we can conclude that currently there lacks a commonly effective way to publicize TechTown to the vast majority of alumni.

CURRENTLY LEARN ABOUT TECHTOWN EVENTS AND RESOURCES
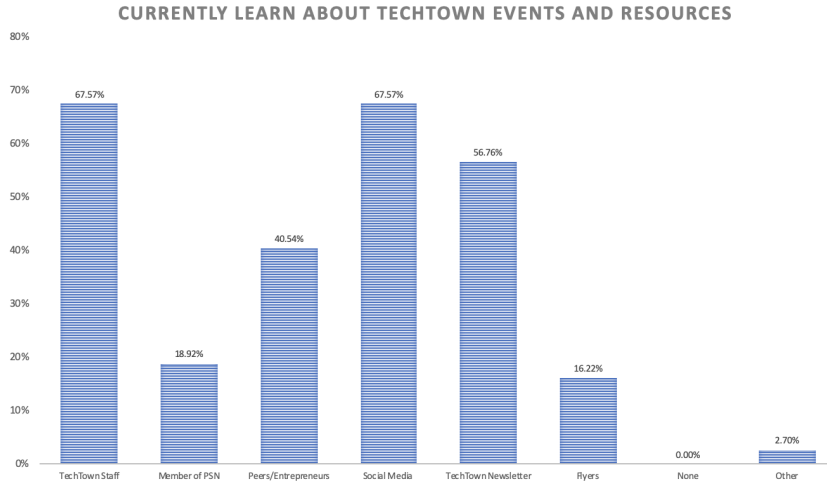
The tendencies to learn from TechTown staff and social media hold for all groups of alumni. Among other options, the TechTown newsletter sees mixed interest, with only 56% of alumni relying on it for updates. However, it is also worth noting that the majority of Retail Boot Camp alumni rely on the newsletter (64%), whereas the other types of alumni typically do not. Workshop attendees also demonstrate a slight tendency to learn about TechTown from peers and entrepreneurs (58%).

P(Y|X)

	SWOT City	Retail Boot Camp	SHOP	Workshop	Group TA	PS Provider	PS Recipient	Other
TechTown Staff	0.69	0.64	0.62	0.58	0	0.8	0	0
Member of PSN	0.23	0.21	0.38	0.42	0	0.2	0	0
Peers/Entrepreneurs	0.35	0.45	0.38	0.58	0	0.4	0	0
Social Media	0.65	0.7	0.62	0.75	0	0.6	0	0
TechTown Newsletter	0.46	0.64	0.5	0.33	1	0.4	0	0
Flyers	0.12	0.18	0.12	0.083	0	0	0	0
None	0	0	0	0	0	0	0	0
Other Resource	0.038	0.03	0	0.083	0	0.2	0	0

Recommendations

Social Media Outreach
- Feature alumni on Instagram/Facebook
- Promote networking events or workshops open to public

Newsletter
- Feature alumni to make it more personal
- Provide a schedule of upcoming programs or events
- Send it out more frequently

TechTown Staff
- Encourage staff to share events or programs with interested people
- Ask them to help publicize new alternative ways to learn about upcoming opportunities (newsletter, social media groups, etc.)

Whether alumni are interested in Focus group?

86% of place-based alumni show interest and provide personal information for potentially participating in focus groups. This result indicates that focus group could be a suitable approach for TechTown to keep in touch with all alumni and better serve them in a smaller scale with specific topics.

PARTICIPATE IN FOCUS GROUP

▨ YES ▨ NO

14%

86%

P(Y|X)

Focus Group	SWOT City	Retail Boot Camp	SHOP	Workshop	Group TA	PS Provider	PS Recipient	Other
	0.92	0.85	1	0.83	1	1	0	0