Initial Report

Last Modified: 04/12/2017

1. Name (first and last)

Text Response
Sean Pili

Statistic	Value
Total Responses	1

2. VT Email

Text Response
seanpili@vt.edu

Statistic	Value
Total Responses	1

3. Contact Phone

Text Response
7038357263

Statistic	Value
Total Responses	1

4. Essay (up to 500 words): “What do you want to get out of this experience?”

Text Response
I want to get three things out of my experience with B-REU:’s DSPG program to conduct meaningful research, to network with researchers and practitioners in the field of statistics and to learn new tools for statistical computing. I conducted a plethora of research at the USPS as a Product Classification Intern last summer regarding marketing strategies in order to update their First-Class Mail product plan. Most of the marketing strategies I referenced while drafting my product plan involved learning the behaviors of different types of mailers. In the studies I referenced, mailers were classified by demographic information that the USPS and Royal Mail (the U.K.’s postal service) collected via mailer surveys, i.e. citizens were selected randomly and told to answer information about themselves, how much mail they send and receive and whether they read all of the mail they receive. I was intrigued by the results of the studies I read regarding mailer behavior and would like to eventually design my own studies regarding human behavior. Before I am ready to design my own studies I will need to start somewhere and I believe that conducting undergraduate research for the Biocomplexity Institute at Virginia Tech via the DSPG program is an ideal way for me to do so. I believe that because after viewing the past projects of various students on your webpage. They did not look like filler work, they were interesting to view. For example, Evaluating Innovation Of Open Source Software, a publication that undergraduate students Romcholo Mactua, John Higgins and Alex Gagliano contributed to was very interesting to me. The visualizations (that appear to be created in R via the ggplot2 library) were crisp, clear and easy to understand and it may prove useful to the National Science foundation. Another reason I wish to be a part of the DPSG research program is because I will have the opportunity to reach out to a variety of researchers and practitioners in my field if I have questions regarding my work. Communication is one of the most important aspects of statistics. If I do not ask the right research question while designing an experiment, the results it yields may be useless. Therefore, being able to ask experienced researchers for help is something that I value when considering where to work. Another thing I value when looking for employment is the ability to learn new software that will help me query, analyze and visualize data. Currently, I am proficient in R, Python and SAS and have minimal exposure to MySQL. I would very much like to learn Hadoop to analyze big data and GIS to create visualizations of areal data while conducting undergraduate research for B-REU. Since I will be able to conduct meaningful research, learn new software and collaborate with professional researchers, I would very much like to conduct undergraduate research for B-REU during their DSPG program.

Statistic	Value
Total Responses	1

5. Essay (up to 500 words): "Please describe any previous research experience and/or work experience you may have."

Text Response
My most recent relevant work and research experience was last summer when I interned at the USPS. While interning there my main task was to update the USPS' First-Class Mail product plan. I had to conduct a plethora of research to update the USPS' First-Class mail product plan because I had to update their marketing strategies, provide historical volume trends of First-Class Mail and justify the discounts that they were currently running for their large mailers (companies that met certain volume thresholds of mail sent via the USPS.) I conducted half of my research via the USPS' intranet by searching for and referencing a multitude of studies conducted by the USPS that were geared to either gauge the public's attitude towards mail, why First-Class Mail volumes have been declining since 2008, how advertising mail can increase the effectiveness of one's advertising campaign (either by its self or as part of an omni-channel marketing strategy), the public's attitude towards mail with colored ink or mail with an extra tactile dimension (such as tabs or pop ups) and the public's attitudes towards mail that contains a digital component (such as QR code or and NFC chip that one can scanned with one's phone.) I was also given literature by my superiors containing studies with similar information to what I described above. In addition, my superiors also gave me access to the USPS' Revenue Pieces and Weight reports (RPWs) which I used to track the volumes of First-Class mail for the last 10 years. I referenced a study that found mail with colored ink can stimulate more brain activity in those reading it and has a higher probability of being completely read by mailers instead of being tossed versus mail in black and white in my product plan to justify a promotion that gave mailers a discount if they used colored ink in their mailings. I also referenced a study conducted by Royal Mail (the U.K.'s Postal Service) that found incorporating advertising mail into one's advertising campaign can increase its effectiveness by roughly 3 times to give USPS employees a strong sales pitch to use on potential mailers. I believe that the research experience I gained last summer at the USPS combined with my background in statistics should make me an ideal candidate for your vacancy.

Statistic	Value
Total Responses	1

6. In Fall 2017 you will consider yourself to be a:

#	Answer	Bar	Response	%
1	Freshmen Undergraduate Student		0	0%
2	Sophomore Undergraduate Student		0	0%
3	Junior Undergraduate Student		0	0%
4	Senior Undergraduate Student		1	100%
	Total		1	

Statistic	Value
Min Value	4
Max Value	4
Mean	4.00
Variance	0.00
Standard Deviation	0.00
Total Responses	1

7. What degree(s) and major(s) are you pursuing?

Text Response
B.S. Statistics

Statistic	Value
Total Responses	1

8. List any Minors you are pursuing.

Text Response
Actuarial Sciences and Communication

Statistic	Value
Total Responses	1

9. List any honors and/or awards received:

Text Response

Statistic	Value
Total Responses	0

10. Please indicate which position you are interested in:

#	Answer	Bar	Response	%
1	For pay		0	0%
2	For VT credit (you are responsible for contacting your department to obtain advisor approval for research credit. This form should be submitted to BI once you have been matched.)		0	0%
3	either for pay or VT credit		1	100%
	Total		1	

Statistic	Value
Min Value	3
Max Value	3
Mean	3.00
Variance	0.00
Standard Deviation	0.00
Total Responses	1

11. Please rank in order of preference which labs you are interested in:

#	Answer																		Total Responses
1	Mathematical Biocomplexity Laboratory	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Network Dynamics and Simulation Science Laboratory	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3	Nutritional Immunology and Molecular Medicine Laboratory	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4	Social and Decision Analytics Laboratory	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5	Biochemical Networks Modeling Group	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6	Dickerman Research Group	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7	Epigenomics and Computational Biology Laboratory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
8	Hoeschele Research Group	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
9	Michalak Research Group	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
10	Capelluto Research Group	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
11	Cimini Research Group	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
12	Finkielstein Research Group	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
13	Hauf Research Group	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
14	Kojima Research Group	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
15	Data Science for the Public Good Summer Program	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
30	Metagenomics: Environmental Genomics and Informatics Summer Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
45	Kale Research Group (NIMML)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	Total	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-

Statistic	Mathematical Biocomplexity Laboratory	Network Dynamics and Simulation Science Laboratory	Nutritional Immunology and Molecular Medicine Laboratory	Social and Decision Analytics Laboratory	Biochemical Networks Modeling Group	Dickerman Research Group	Epigenomics and Computational Biology Laboratory	Hoeschele Research Group	Michalak Research Group	Capelluto Research Group	Cimini Research Group	Finkielstein Research Group	Hauf Research Group	Kojima Research Group	Data Science for the Public Good Summer Program	Metagenomics: Environmental Genomics and Informatics Summer Program	Kale Research Group (NIMML)
Min Value	3	4	5	2	6	7	17	8	9	10	11	12	13	14	1	16	15
Max Value	3	4	5	2	6	7	17	8	9	10	11	12	13	14	1	16	15
Mean	3.00	4.00	5.00	2.00	6.00	7.00	17.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	1.00	16.00	15.00
Variance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard Deviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Responses	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1