1. Name (first and last)

Text Response
Ben Swartz

Statistic	Value
Total Responses	1

2. VT Email

Text Response
benjs23@vt.edu

Statistic	Value
Total Responses	1

3. Contact Phone

Text Response
703-434-1361

Statistic	Value
Total Responses	1

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

Text Response
Data science is a rapidly expanding field. Along with machine learning, AI, renewable energy technology, and RF communication, I predict that data science will become one of the largest growing fields of study in the next 15 to 20 years. Yet, these disciplines are not independent of one another. With the integration of electronics and microprocessors into more and more common consumer goods, systems are more complex and interdisciplinary than ever before. Large and complex systems contain huge amounts information. Engineers of systems and systems' components must be able to extract and interpret information in order to judge how well a design is working and to improve future design iterations. Interpreting this information is where data science enters the picture. I am a senior electrical engineering student with a focus in power electronics and energy harvesting. When I graduate I hope to work on power electronic components of renewable energy systems, and I recognize the importance of data science in my field. I have some experience cleaning and visualizing small data sets in MATLAB and C++, and I would like to learn more advanced techniques of cleaning data, data analytics, and visualizing results in order to inform a decision-making process. I have two goals in mind for acquiring these skills. In the near term I will be more employable when I graduate, and in the long term I will have a foundation of knowledge and skills to apply to analyzing real-world electrical engineering problems and solutions.

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
Prior to potentially taking this class, I do not have much work or research experience that relates to data science. I have taken two programming courses in C/C++ and have used MATLAB to process and interpret data on several homework projects. From my experience, I understand programming logic, how to structure and debug code, and how to manipulate small data sets. I have programming skills that would be a basis for learning data science. Currently, I am doing undergraduate research on a senior design project. The project requirement is to harvest energy off of a pre-existing, high energy electrical system to use in a power supply circuit that can charge a lithium-ion battery. My group is designing the energy harvester, power supply, and a media converter that can convert an electrical signal to fiber optics.

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. Electrical Engineering

Statistic	Value
Total Responses	1

8. List any Minors you are pursuing.

Text Response

Statistic	Value
Total Responses	0

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.)	████████	1	100%
3	either for pay or VT credit		0	0%
	Total		1	

Statistic	Value
Min Value	2
Max Value	2
Mean	2.00
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	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2	Network Dynamics and Simulation Science Laboratory	0	1	0	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	0	1	0	0	0	0	0	0	0	0	0	0	1
4	Social and Decision Analytics Laboratory	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5	Biochemical Networks Modeling Group	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
6	Dickerman Research Group	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
7	Epigenomics and Computational Biology Laboratory	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8	Hoeschele Research Group	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
9	Michalak Research Group	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10	Capelluto Research Group	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
11	Cimini Research Group	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
12	Finkielstein Research Group	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
13	Hauf Research Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
14	Kojima Research Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	1
30	Metagenomics: Environmental Genomics and Informatics Summer Program	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	Total	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
Min Value	5	2	6	3	7	8	9	10	11	12	13	14	15	16	1	4
Max Value	5	2	6	3	7	8	9	10	11	12	13	14	15	16	1	4
Mean	5.00	2.00	6.00	3.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	1.00	4.00
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
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
Total Responses	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1