Initial Report

Last Modified: 01/25/2018

1. Name (first and last)

Text Response
Devika Nair

Statistic	Value
Total Responses	1

2. Email

Text Response
devika.t.nair@gmail.com

Statistic	Value
Total Responses	1

3. Contact Phone

Text Response
240-246-6804

Statistic	Value
Total Responses	1

4. In Fall 2018 you will consider yourself to be a:

#	Answer	Bar	Response	%
1	VT Freshmen Undergraduate Student		0	0%
2	VT Sophomore Undergraduate Student		0	0%
3	VT Junior Undergraduate Student		0	0%
4	VT Senior Undergraduate Student		0	0%
5	Between Undergrad and Graduate school		0	0%
6	Graduate school		1	100%
	Total		1	

Statistic	Value
Min Value	6
Max Value	6
Mean	6.00
Variance	0.00
Standard Deviation	0.00
Total Responses	1

5. What degree(s) and major(s) are you pursuing along with institution?

Text Response
MS Data Analytics, American University

Statistic	Value
Total Responses	1

6. List any Minors you are pursuing.

Text Response

Statistic	Value
Total Responses	0

7. List any honors and/or awards received:

Text Response

Statistic	Value
Total Responses	0

8. Currently we have 1 program accepting applications which includes:

#	Answer		Total Responses
15	Data Science for the Public Good	0	0
	Total	0	-

Statistic	Data Science for the Public Good
Min Value	-
Max Value	-
Mean	0.00
Variance	0.00
Standard Deviation	0.00
Total Responses	-

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

Text Response
I have two goals in applying to the Data Science for Public Good program at Virginia Tech. The first is to expand and refine my technical skills within data science. I have been fortunate to study many areas of data analytics, including business intelligence, predictive analytics, metadata, and open data. I was able to attend the DSPG showcase of student work last year, and I was impressed and inspired by the breadth and depth of the analysis. If accepted to the program, I would aim to further develop my technical skills, both existing skills in R and SQL, and new skills in Python or GIS. The second goal is to contribute my skills to the field of local government. I am currently interning at Arlington County, on their Process & Data Analytics Team. The position has afforded me the opportunity to observe how local government operates. I feel fortunate to be part of a newly established team, as I’ve been able to help shape the work and mission of the team. It has been particularly exciting to see the impact of our work as we collectively explore how data can empower various branches of local government to improve the work and lives of its residents. If accepted to the DSPG program, I would work to leverage information to yield insights and stories that advance and empower our community. I hope my background in science and analytics and my time in IT and local government will serve me well to accomplish these goals throughout the course of this program.

Statistic	Value
Total Responses	1

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

Text Response
My academic background is founded in research, but the bulk of my work experience lies in IT development and operations analysis. I completed my undergraduate studies at Franklin & Marshall College where I earned a BA in Neuroscience. During that time, I had three major research opportunities across very different types of laboratory work. My first undergraduate research course in the field of genetics investigated possible links between gene variants and incidence of disease in the local Amish population. My contribution here was primarily as a lab assistant (sequencing and blots), but I was lucky enough to be included as an author on the resulting PLoS ONE publication. The second experience took place in Paris, where I worked in the field of optogenetics (genetically manipulating cells to respond to light stimuli in order to better observe specific responses). This work investigated the mechanism by which specific neural circuits in zebrafish gave rise to locomotion. My contribution here was assisting with transgenesis of zebrafish embryos to render specific genetic lines of zebrafish responsive to light. Additionally, I helped to test an algorithm whose function measured changes in locomotion in response to light stimulation. My last research experience in animal behavior research investigated the link between long-term social dominance in anole lizards and various behavioral indicators. Here, my contribution was more substantial as I participated in this work over the course of a year, setting up the animal tanks and experimental conditions, running and recording the lizard interactions, and coding the animal behavior for analysis. Again, I was lucky to be included as a coauthor on the resulting publication in Animal Behavior and Cognition. However, as I entered the professional world, I found myself drawn towards exploring different fields. I pivoted into the non-profit world and spent almost a year working at Genetic Alliance, which served as an educational and advocacy resource for families and communities affected by genetic disease. There, I worked for the Baby’s First Test program. My role was to help promote and educate people on the importance of newborn screening, a public health program implemented to detect genetic disorders early on and intervene for better long-term health outcomes. More recently, I have exploring and developing a career in information technology. Over the last few years, I worked as a business analyst for a healthcare IT consulting firm called the Advisory Board Company. In these roles, I discovered an aptitude and zeal for business intelligence through Salesforce, which the company used as their primary operations platform. I began writing reports and dashboards, and later became a business liaison between various departments and the Salesforce development team. During this time, I realized my passion for data, thus leading to my enrollment in the master’s program in data analytics at American University. The worlds of academic research and data analytics may appear unrelated, but I would argue that there is a common thread between the two: the ability to test hypotheses with evidence.

Statistic	Value
Total Responses	1

11. Essay (up to 500 words): "Please describe your background (courses taken, research projects, etc.) in statistics and mathematics.”

Text Response
My undergraduate studies included the courses Calculus I and Biostatistics as part of my degree in Neuroscience. My graduate studies included the course Applied Managerial Statistics.

Statistic	Value
Total Responses	1

12. Essay (up to 500 words): "Please describe your background (courses taken, research projects, etc.) in social and behavioral sciences."

Text Response
In high school, I enrolled in the Summer Scholars program through George Washington University, where I took Psychology 101. My undergraduate studies included the courses Biopsychology as part of my degree in Neuroscience. Biopsychology integrated the theoretical foundation of psychology with the biological underpinnings of cognition and brain function. My graduate studies included a (brand-new) course Organizational & Social Networks, which integrates the various theories of social sciences, economics, and organizational sciences with descriptive and predictive analytics using social network data. For this course, we analyzed a dataset of employees and matricized relationships and skills to analyze them from a network perspective.

Statistic	Value
Total Responses	1

13. Essay (up to 500 words): "Please describe your background in programming."

Text Response
Prior to my studies in data analytics, I had been exposed to programming through my work as a business analyst on a corporate Salesforce development team, where troubleshooting became much faster if I could identify a particular segment of problematic code. My first hands-on experience with computer languages began when I started the Arlington County internship, where I learned how to interact with data using SQL. I am thankful for this opportunity, as each project I take on highlights the criticality of accessing and transforming the data. The bulk of my programming experience, however, is in R. I began to learn R last summer in a course called Predictive Analytics, where we learned how to apply various regression methods (linear and logistic) to datasets. We were also exposed to other methods (such as random forests and neural networks), but the course served as a critical jumping off point for my training. This initial learning experience has since grown. Currently, I am in the midst of my year-long practicum with DC United through my master's program. The practicum serves as an opportunity to apply the analytics skills and techniques to a real-world business challenge. We are investigating the link between game conditions (weather and stadium conditions) and game outcomes. Here, I have been able to run the gamut of data analysis experiences, as we have done a little bit of everything for this project: data collection, cleansing, database setup (SQLite), data dictionary exploration/creation, and of course, data analysis and modeling through R. I still have another semester left in this project and I look forward to the advanced data modeling, as well as model testing and validation, that we intend to take on in the next few months.

Statistic	Value
Total Responses	1

14. Essay (up to 500 words): "Please provide information about other significant courses you have taken within your field of study."

Text Response
Other important coursework during my graduate studies (not previously mentioned) includes: • Management of Information Systems • Database & Big Data • Business Insights through Analytics • Business Intelligence • Business Process Analysis Coursework that I will complete by May 2018 includes: • Data Science • Text & Visual Analytics Other tools I am familiar with include: Power BI, Tableau, Solver, SPSS, RapidMiner, UCINET, and NetDraw. Another area I want to highlight on this application is my experience working with local government over the last 8 months. In this time, I have been able to work with a variety of teams and their data to help solve business questions with data visualizations such as: • Facilities Management: How do County employees make use of the current conference rooms and spaces? • Microsoft Application Utilization: To what extent do County employees interact and rely upon Microsoft tools (Skype, OneDrive, Sharepoint, Powerpoint, Word, Excel, and Outlook)? • At-Risk Youth: What trends in youth demographics and charges exist in Arlington County's juvenile arrests over the last 4 years? I have also taken on a number of community-building opportunities around data analytics. Specifically, I helped to assemble and lead a session of Camp Herricane: an educational program where high school girls engage with emergency management crisis scenarios to become empowered leaders. I was able to put together a STEM workshop on data analysis, speaking to the concepts and power of data analysis in a crisis! Additionally, I helped our team to launch an internal collaboration group for data analysis called the Arlington Data Analyst Community, a network of data professionals within the County.

Statistic	Value
Total Responses	1

15. Please list the name and contact information for 2 references (teachers, mentors, or employers) that we will contact for a letter of reference/brief survey. Please make sure you list the correct email and they know we will be contacting them soon (within the next week). Only 2 references will be contacted; do not list more than 2.

Text Response
Jaime Lees (jlees@arlingtonva.us 703-888-8359) and Frank Armour (farmour@american.edu 202-885-1863)

Statistic	Value
Total Responses	1