



February 9, 2018

To whom it may concern:

It is my honor to recommend Amirah Alshamrani for acceptance into your program. As I continue in my career seeing the level of research skills considered necessary on a daily basis to perform high priority, high visibility analysis for the safety of our nation, I would like to give credit to Amirah Alshamrani as one of the students who's love and aspiration to be the best computer scientist that she can be, has fueled my passion as an educator. I am currently Amirah Alshamrani's professor in a Data Analytics course where we have upon multiple occasions discussed the research and implementation skills necessary to be a successful data scientist/developer in Big Data and large-scale distributed parallel analytics. This has allowed me to see how innovative and advance her level of thinking is, as she discusses Computer Science implementation techniques which utilize complex statistical modeling, machine learning, and Big Data analytics to solve a real world information technology issues. Amirah Alshamrani is one of the best computer scientists I have ever had a pleasure of teaching or will ever come across. She has an innate ability to inspire and produce technically innovative ideas and is one of the best I've seen in understanding and sharing her computer science knowledge. She also portrays an innate ability to perform novel innovative research and has a willingness to help others understand the importance working extremely hard to achieve their goals, but also the importance of having a work/life balance.

As a current professor, researcher, and cryptologist, I know that there are many important attributes that are needed to be successful in a graduate or research program which includes selfless collaboration and a drive to accomplish very complicated developmental/research projects. An important attribute that I can remember about Amirah Alshamrani, is that she strives to bring out of best every individual she works with or mentors. She has a remarkable ability to assist in the developmental aspects of projects, yet stimulate the minds of individuals that she is working with in order to bring the best out of them and have them achieve at the highest level in their perspective endeavors. Amirah Alshamrani does not only work exceptionally well as an individual, but she also works excellent within groups which is definitely needed to be successful in the graduate school and research. Amirah Alshamrani is one of the rare individuals who takes extra time on certain projects to make sure all participants have a full understanding of the code, processes and procedures of the project. It is tough to mention all of Amirah Alshamrani's amazing qualities in one letter and the ones that are aforementioned only scratch the surface.



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Amirah Alshamrani is the type of leader that not only leads by example, but also has the innate ability to help her peers achieve success at the highest level possible. Amirah Alshamrani lives by the belief of not letting the excuses of her past trials and tribulations determine her future success. Amirah Alshamrani has a tremendous amount of faith in her own computer science abilities and she utilizes her experience and expertise to help educate others and push them extremely hard. I feel that she has the knowledge, work ethic, will, and desire to be successful at any aspect of Computer Science (analytics, databases, infrastructure, data science, etc.) and will be able to compete for industry and academic positions with students from any University.

I can remember vividly, during a semester when I was teaching Amirah Alshamrani. I gave our students a very difficult final project to implement in data analytics. Though this was a very difficult project to implement, Amirah Alshamrani's honesty and uprightness about the complexity of the project gave her other project members the drive, determination and motivation necessary to finish the project on time. Without Amirah Alshamrani's hard work, dedication, and commitment to computer science and excellence, her group would have never seen the "light at the end of the tunnel" and may have never achieved a successful grade on the project! I strongly recommend her for acceptance to your program.

A handwritten signature in red ink, reading "Benjamin Harvey".

Benjamin S. Harvey, Ph.D.

George Washington University

National Security Agency/Central Security Service