Min Kyung Lee
2041 Country Squire Ct.
Apt 302
West Lafayette, IN 47906

McAuliffe Graduate Scholarship Committee
MS Statistics in Applied Statistics

To Whom It May Concern,

Having been accepted to Purdue University for the 2021 Fall term to pursue a Master's in Applied Statistics, I am writing to express my desire to participate in the McAuliffe Graduate Scholarship program. As a student working to pursue degrees in both Statistics and Industrial Engineering, I have a strong desire to use selected methods of Statistics to improve the efficiency of systems, specially in healthcare. My specific interest is in enhancing the health and well-being of underrepresented populations including women, rural populations, and racial/ethnic minorities.

For example, rural communities account for a significant proportion of the Indiana population. Yet, they face numerous challenges, including access to quality healthcare and workforce shortages. The effect of this burden intensifies in Indiana given the elevated rates of tobacco-use, obesity, diabetes and hypertension. I have sought opportunities to develop coordinated and tailored care in rural communities. As a graduate research assistant, I joined a study that aims to understand policies that impact rural health. The study was in quantifying a 'transport-protocol' that enforces a mandatory routing of stroke patients to stroke-centers. Although the protocol serves to prevent treatment delay by reducing unnecessary transfers between hospitals, this induces another problem as rural residents generally do not have access to stroke-centers within two-hours of onset. Through simulation and statistical modeling, I addressed existing health disparities between rural and urban Indiana and proposed how telemedicine and social networking in healthcare could benefit stroke patients and Indiana rural health.

My research in 'Policy Outcomes in Neonatal Care' compared prevalence of caries, asthma, and adverse health outcomes among children aged 1-19 years during 1999-2004 and 2011-2016. Using a domain logistic regression method in R, I assessed the difference in care for undocumented immigrants and their children. Findings were adjusted with patient demographics and environmental data.

My background is an asset to society as data analytics, machine learning, and optimization could be a domain in supporting collaborative solutions to issues of health quality and access for underrepresented populations. This scholarship would greatly help me gain more time to focus on research and continue my studies in anticipation of an improved financial situation amidst COVID pandemic. I would be so grateful to receive a scholarship.

Thank you for your time and consideration. I look forward to hearing from you.

Sincerely yours,

Min Kyung Lee