December 2, 2020

China Data Institute 455 E. Eisenhower Pkwy, Suite 300 Ann Arbor, MI 48108

To whom it may concern:

This letter is written to support Jiongyan Zhang's application for graduate school admissions in the graduate program at your university.

Jiongyan attended the R&D team of COVID-19 data analysis case co-organized by the China Data Institute, Harvard University and Wuhan University in 2020. The objectives of this team are to collect and process the epidemic data and analyzing the data for the spatial study of COVID-19 outbreak. Jiongyan's main duty was to collect and process the flight data and integrate the data with COVID-19 data for the spatial analysis of the COVID-19 impact on the global flight network.

Jiongyan demonstrated strong research and programming skills and desires for challenging work during the project. He finished one paper titled as "Spatiotemporal Responses of Global Flight Networks to the COVID-19 Epidemic" for journal publication mostly based on his own work. The paper discussed the impact of COVID-19 on the global flight network from Jan. to Apr. 2020 and compared the different flight-epidemic patterns in China, the US, Europe, and other regions.

Wuhan University is one of the top universities in China with the internationally well-known reputation in its GIS program. I believe that Jiongyan would be a successful graduate student. I would like to strongly recommend him for admission to a graduate program in your school. Please feel free to contact me at 734-272-2814 or sbao@umich.edu if I can provide any further information.

Sincerely yours,

Shuming Bao, Ph.D.

Director, China Data Institute