SCHOOL OF INFORMATION
UNIVERSITY OF MICHIGAN

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Dear Data Science Teaching Fellow Search Committee:

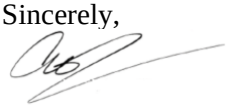
I am writing to apply for the position of a Postdoctoral Teaching & Learning Fellow in the Master of Data Science (MDS) program at the University of British Columbia (UBC). I am currently a **Postdoctoral Research Fellow in Educational Data Science** and an **Adjunct Lecturer in the online Master of Applied Data Science (MADS)** at the School of Information, University of Michigan – Ann Arbor (UM). My research in the field of learning analytics focuses on applying statistical and computational techniques on large educational datasets to analyze learning behaviors and improve student success. In my most recent project (as PI), sponsored by the Michigan Institute of Data Science, I analyzed students' mobility patterns on campus of over 50,000 UM students in Fall 2019 and Fall 2020. This project utilizes high-resolution location data (~220GB csv) from the campus WiFi network to understand how students' movements and social interactions have changed throughout the pandemic, and to identify campus spaces and student groups that are more vulnerable to potential COVID-19 transmission.

Through my own research of the UBC MDS program and conversations with Dr. Tiffany Timbers, I find this position to be a great match for my research and teaching experience in data science. I have several years of teaching experience, both as a TA and as a lead instructor, in data science/statistics courses in both residential and online settings including undergrad and master students. As an Adjunct Lecturer in the UM's MADS program, I am involved in the teaching of four courses: SIADS 505 - Data Manipulation (pandas, regex), SIADS 532 - Data Mining I (item sets, vectors, matrices, sequences), SIADS 632 - Data Mining II (N-gram, Hidden Markov, time-series), SIADS 680 - Learning Analytics (Supervised learning, Predictive biases, Data visualization). Similar to the UBC MDS, the UM MADS courses are four-week long with a strong emphasis on the practical application of data science through weekly assignments and capstone projects at the end of the program. During my weekly office hours (via Zoom), I provide support and guidance to students with their Jupyter Notebook assignments, and answer questions related to the course contents (e.g. via Slack). I am also co-developing a new course SIADS 680 – Learning Analytics, in which I am in charge of designing autograded assignments using nbgrader. As part of my teaching, I work frequently with GitHub and Python while I use R for most of my research tasks. Given the many similarities between the UBC MDS and UM MADS programs, and my hands-on experience working with students from a wide range of technical backgrounds, I am confident that I will be able to hit the ground running quickly at UBC. Of the courses outlined in the MDS program, I am prepared to teach DSCI 511, 523, 531, 551, 554, 552, 561, 562, 574 and I am always open to other suggestions.

I was drawn to UBC by the dedicated team of MDS instructors who collaborate and develop cutting-edge tools and materials for data science education (e.g. bookdown, blogs, open syllabi, and lecture videos). I plan to play an active role in expanding and updating the MDS curriculum in collaboration with MDS faculties by designing industry-relevant learning materials including topics such as parallel processing, time-series analysis, and reproducible workflow. In addition, I am interested in collecting data on how people learning data science (e.g. log-files from Jupyter notebook) and extracting insights to improve the learning experience of students. I am also passionate about making data science more accessible and inclusive to diverse learners, especially for women and underrepresented minorities.

Thank you for considering me for this position.
Please find my CV, list of references, and teaching statement attached to this application.

Sincerely,



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