## Mohaddeseh Mozaffari

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Computer Science Department Université du Québec à Montréal 201, avenue du Président-Kennedy Montréal (Québec) H2X 3Y7 Canada lefebvre.joel@uqam.ca January 17, 2025

Dear professor Lefebvre,

I am writing to express my interest in joining the Digital Imaging, Neurophotonics, and Microscopy Laboratory (LINUM) at Université du Québec à Montréal (UQAM) as a PhD candidate. I have a strong background in statistical physics and complex systems. This, combined with my passion for medical imaging and machine learning, has led me to pursue research that may be useful in these areas. I believe that being on your multidisciplinary team is the perfect environment to work with experts from diverse fields, especially Brain imaging and deep learning.

I am currently completing my master's degree at Shahid Beheshti University, where I am analyzing fMRI data using Topological Data Analysis (TDA). Additionally, I am collaborating on a project focused on segmentation of coronary artery vessels using X-ray angiography image analysis. These experiences helped me apply machine learning and AI techniques to real-world data with great insights. I also have a strong programming background in Python, C++, and Git, and I love sharing my code on GitHub to teach others and help others benefit from my work. To share more knowledge I also teach Python programming, which has helped me improve my ability to explain difficult concepts simply to people with different backgrounds and learning styles.

The opportunity to work at LINUM is a great chance because it is renowned for its cutting-edge research in augmented microscopy, image processing, and neuroimaging applications. I am particularly excited about the career opportunities integrating artificial intelligence and biomedical imaging because they are consistent with my previous experience. Additionally, I was recently diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), and after starting treatment, my life improved significantly. Now my quality of life is much better, and this has motivated me even more to pursue medical research. I want to use the skills I've gained so far to help others.

Beyond the research itself, I have heard that Montreal has a high safety index for walking alone during night, and it is a good opportunity for me because in my city, I can't do that and want to know what it feels like. Also, Montreal gives me an excellent chance to improve my French language skills and communicate with people from various cultures.

Thank you for considering my application. I am excited about the opportunity to contribute to your team and to learn from the experts at LINUM. I look forward to the possibility of discussing how my experience and goals align with the needs of your research group.

Sincerely,

Mohaddeseh Mozaffari