CERTIFICATE OF APPROVAL

Submitted by Md Nahid Ebna Hasan Khan

In partial fulfillment of the requirements for the degree of

Master of Applied Science in Electrical, Computer, and Software Engineering

Date of Defence: January 27th, 2022

Thesis title:

Clustering analysis of lock contention types using run-time performance metrics

The undersigned certify that the student has presented their thesis, that the thesis is acceptable in form and content and that a satisfactory knowledge of the field covered by the thesis was demonstrated by the candidate through an oral examination. They recommend this thesis to the School of Graduate and Postdoctoral Studies for acceptance.

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□ As research supervisor for the above student, I read and approved the changes required by the final examiners and recommend the thesis for acceptance:

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