

INDIAN STATISTICAL INSTITUTE

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Date: 22.07.2024

TO WHOM IT MAY CONCERN

This is to certify that **MR. SUMAN MAHAPATRA** has submitted his PhD thesis entitled "Nuclei Segmentation and Color Normalization of Histological Images: Rough-Fuzzy Circular Clustering to Deep Generative Modeling" to the PhD/D.Sc. committee in Computer Science of the Indian Statistical Institute on July 19, 2024.

I wish him all the very best in his future endeavors.

A handwritten signature in blue ink, appearing to read 'Krishnendu Mukhopadhyaya', is written over a circular stamp that is partially visible on the left.

Krishnendu Mukhopadhyaya

Convener

PhD/D.Sc. Committee (Computer Science)