Image Registration with and without labeled masks

To investigate if adding biological features can improve the existing registration process in state-of-art and deep learning networks, I used mitochondria masks or lung masks data to guide the alignment procedure in real-time. The input datasets consist of unaligned 2D electron microscopy (EM) images that are computationally expensive to map and create 3D volumetric datasets. Feature matching methods and a deep learning framework, Monai, were implemented to align 2D EM images and 3D lung CT scans, respectively. This approach will guide the registration methods to run faster and with better accuracy for biomedical image analysis.

November 22, 2021
11:00 am

Campus Center - 2540, 2nd floor
University of Massachusetts, Boston

LIVESTREAM (zoom link)
Meeting ID: 961 2435 3800
Passcode: 696775

Thesis Committee
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