



南京信息工程大学

NANJING UNIVERSITY OF INFORMATION SCIENCE & TECHNOLOGY



自动化·智慧讲堂

2024年

自动化学院
&
软件学院

MACHINE LEARNING FOR MEDICAL IMAGE SEGMENTATION AND REGISTRATION

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ABSTRACT:

THIS TALK HAS TWO PARTS.

IN PART 1, I WILL DISCUSS IMAGE SEGMENTATION, FOCUSING ON THREE SPECIFIC MODALITIES: OPTICAL COHERENCE TOMOGRAPHY (OCT), CARDIAC MR (CMRI) AND ECHOCARDIOGRAM (ECHO). I WILL PRESENT BOTH MODEL- AND DATA-DRIVEN APPROACHES FOR ACHIEVING ACCURATE SEGMENTATIONS. THEN IN PART 2, I WILL INTRODUCE UNSUPERVISED LEARNING FOR MEDICAL IMAGE REGISTRATION, SPECIFICALLY FOCUSING ON HOW TO REGISTER HIGH-DIMENSIONAL MEDICAL IMAGES IN A FAST, PRECISE AND DATA EFFICIENT MANNER. THROUGHOUT THE PRESENTATION, I WILL SHOWCASE VARIOUS REAL-WORLD APPLICATIONS DERIVED FROM SEGMENTATION AND REGISTRATION RESULTS.

时间: 2024年4月9日 (周二) 15:00-16:30

地点: 南京信息工程大学 滨江楼二楼报告厅