

Mengyi Zhou

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EDUCATION

Imperial College London <i>Master of Research (MRes) in Medical Robotics and Image-Guided Intervention</i>	09/2023 - 09/2024
Beijing Normal University <i>Bachelor of Science (BSc) in Computer Science and Technology (GPA: 87.6/100)</i>	09/2019 - 06/2023

LANGUAGE

IELTS: 7.0 <i>(Listening: 7.5; Reading: 8.0; Writing: 6.0; Speaking: 6.0)</i>	04/2023
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ACADEMIC EXPERIENCES

Microscopic Visual Servoing for Robot-assisted Endomicroscopy Tissue Scanning <i>Supervisor: Dr. Stamatia Giannarou, Chi Xu</i>	02/2024 - Now
<ul style="list-style-type: none">Evaluate the distance between the pCLE imaging probe and tissue surface to guide the longitudinal translation of the imaging probe with respect to the tissue surface.Use spatial and frequency domain information of pCLE images as the inputs.Extend single-image-based distance regression to video-based distance regression using temporal processing methods.Integrate models into a robotic platform consisting of the 6 DOF parallel robot.	
Development of a Multi-sensing Optical Probe for Tumour Margin Mapping <i>Supervisor: Dr. Alex Thompson, Dr. Stamatia Giannarou</i>	10/2023 - 12/2023
<ul style="list-style-type: none">Developed a system for simultaneous measurement of confocal endomicroscopy images and Raman spectra to allow rapid and accurate classification.Implemented classifiers of pCLE images for two different tumours based on VGG19 with 99.3% accuracy.Implemented a migration learning approach using the pretrained network to classify other samples.Combined the trained model with PCA-based Raman spectral classifiers for multi-class classification with 96.7% accuracy.	
Classification of Eclipsing Binary Light Curves Based on Deep Learning <i>Supervisor: Dr. Xianchuan Yu</i>	12/2022 - 05/2023
<ul style="list-style-type: none">Implemented classification of astronomical light curves using deep learning methods.Estimated non-equally spaced time series periods and smoothed the data using a periodogram method.Designed and implemented the LSTM-based deep neural network auto-encoder.Implemented unsupervised feature extraction of eclipsing binaries light curves and achieved classification task with an accuracy of about 90%.	

AWARDS

Mathematical Contest in Modeling (MCM) - Finalist (Top 2%)	2022
Scholarship for Competition Participation - First-Class	2022
Scholarship for Academic - Third-Class (2 times)	2021 - 2022

EXTRACURRICULAR ACTIVITIES

“EnvrioMoment” Environmental Education Innovation and Communication	2021 - 2022
Beijing Normal University Cycling Association - Vice President	2021 - 2022
Beijing Normal University Volunteer Teacher Team - Publicity Vice Director	2021

SKILLS

Programming: Python, C/C++, MATLAB, Java
Deep Learning Frameworks: PyTorch, TensorFlow
Modeling Softwares: Unreal Engine 4, Unity, Blender