Chuxin ZHANG(She/Her/Hers)

CONTACT INOFRMATION

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EDUCATION

PhD, MIRO Group, Université catholique de Louvain, Brussels 03.2023 – Now

- ASSURE RT: Active and Self-Supervised learning for Uncertainty Reduction and Evaluation in RadioTherapy
- Supervisor: Prof. John Lee
- Founding: FNRS Télévie

MSc in **Image Analysis and Machine Learning**, Uppsala University, Uppsala 09.2020 – 11.2022

- The Uppsala Global Scholarship: Two years of tuition waiver.
- Relevant Coursework: Introduction to Image Analysis, Statistical Machine Learning, Deep Learning for Image Analysis, Reinforcement Learning, Optimization

BE in **Biomedical Engineering,** Northeastern University, Shenyang 09.2016 – 06.2019

- GPA: 85/100 | Top class fast track: Graduated one year early. (Top 15%)
- Relevant Coursework: CPP, Data Structure, Database, Digital Image Processing

SKILLS

Programming Python | C/CPP | MATLAB | TensorFlow | PyTorch | Scikit-learn | Numpy

Language English (fluent) | Chinese (native speaker)

EXPERIENCE

Master Thesis, Department of Information Technology, Uppsala University 11.2022-01.2022
Project: "Probabilistic Detection of Nuclei in Digital Pathology using Bayesian Deep Learning"

- Developed and implemented a Bayesian probabilistic detection method using MC dropout.
- Trained and tested the method on various datasets.

Project, Department of Information Technology, Uppsala University 09.2021 – 12.2021
Project: Parkinson's Disease Classification based on Spirals

- Conducted preprocessing of spirals using the OpenCV and PIL libraries.
- Extracted features from spirals using Vgg16.
- Employed SVM, KNN, and KMeans via scikit-learn to predict patients and healthy individuals.
- Achieved an accuracy of 89%.

Project, Department of Information Technology, Uppsala University 03.2021 – 06.2021

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Project: Object Detection based on Faster R-CNN

- Implemented Faster R-CNN efficiently using the PyTorch deep learning framework to detect jellyfish.
- Achieved a mean Average Precision (mAP) at 0.3.

Project, Department of Information Technology, Uppsala University 03.2021 – 06.2021

Project: Cancer Cell Classification Challenge on Kaggle

- Utilized the PyTorch deep learning framework to train VGG and RESNET models for predicting malignancy in 55,514 cells.
- Achieved an accuracy of 76.7%.

Research Assistant, Institute of Automation, Chinese Academy of Sciences 06.2020 – 09.2020

Project: Computational Analysis and Modeling of Spatial Distribution and Interaction Regulation of Lysosomes at Whole-Cell Scale

- Analyzed lysosomes' motility based on EM images using Python and MATLAB.
- Assisted in establishing deep learning methods (LSTM) for predicting lysosome tracking using Python and PyTorch.

Bachelor Thesis, Northeastern University 11.2018 – 06.2019

Dissertation title: “Research and implementation of 3D reconstruction of breast MRI"

- Implemented the region growing algorithm to segment the breast area from MRI images.
- Utilized the Marching Cube algorithm for surface rendering.
- Created 3D projections using the Ray Casting algorithm.

HONORS / AWARDS

Summer School “Brain Dynamics on the Connectome”, 2021
The Uppsala Global Scholarship, 2020-2022
Second-class Scholarship (Top 20%), 2018
Excellent Social Practice Team of College Students, 2018
Outstanding volunteer, Chinese Young Volunteers Association, 2018
Third-class Scholarship (Top 30%), 2017