Chuxin ZHANG(She/Her/Hers)

xxx@hotmail.com | xxx@student.uu.se
46-xxxxxxx | 86-xxxxxx | xxx, xxx, xxx, Uppsala, Sweden

ABOUT

I am a master's student in Image Analysis and Machine Learning at Uppsala University. Moreover, I will graduate in June 2022. My research interest is the intersection of technology and medicine. I have had several experiences in cross-disciplinary labs.

SKILLS

English (IELTS) | MATLAB | Python | C++ | TensorFlow | PyTorch

EDUCATION

Uppsala University, Uppsala   09.2020 – 06.2022

- MSc in **Image Analysis and Machine Learning**
- 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

Northeastern University, Shenyang   09.2016 – 06.2019

- BE in **Biomedical Engineering**   GPA: 85/100
- Top class fast track: Graduated one year early. (Top 15%)

EXPERIENCE

Master Thesis, Department of Information Technology, Uppsala University   06.2022-01.2022
Project: "Probabilistic Detection of Nuclei in Digital Pathology using Bayesian Deep Learning"

- Implement the Bayesian U-net method.
- Integrate the algorithm to the Fiji plug-in framework.
- Train and test method on various datasets.

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

- Preprocessing spirals with the OpenCV and PIL libraries.
- Using Vgg16, extract features from spirals.
- Use SVM, KNN, and KMeans via scikit-learn to predict patients and healthy people.
- Achieve an accuracy of 89%.

Project, Department of Information Technology, Uppsala University   03.2021 – 06.2021
Project: Object Detection based on Faster R-CNN

- Implemented Faster-RCNN to detect jellyfish using the PyTorch deep learning framework efficiently, 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

- Using the PyTorch deep learning framework, trained VGG and RESNET to predict 55514 cells as malignant or benign, 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

- Used Python and MATLAB to analyze lysosomes' motility based on EM images.
- Assistant to establish deep learning methods (LSTM) for predicting the tracking of lysosomes 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 and segmented the breast area from MRI.
- Used the Marching Cube algorithm to implement surface rendering.
- Created the 3D projection by using the Ray Casting algorithm.

Computer Programmer, Neusoft   06.2018 – 08.2018

Project: License plate recognition system (LPRS)

- Created the user interface by using the Microsoft Foundation Class (MFC) Library.
- Implemented the LPRS databased was by using Microsoft Access.
- Used Open Database Connectivity (ODBC) to connect databases to database management systems.

Course Project, Northeastern University   03.2017 – 05.2017

Project: Computer-aided Diagnosis of Breast Cancer

- Support Vector Machines learned a binary linear classifier from labeled breast cancer data to predict labels for unseen test data.
- Used linear regression classification to predict benign and malignant breast lesions by assigning a threshold.
- Support Vector Machines achieved the highest accuracy at 89%.

HONORS / AWARDS

Summer School "Brain Dynamics on the Connectome", 2021

The Uppsala Global Scholarship, 2020

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

Third Prize (Top 7%), Mathematical Contest in Modeling, 2017