

# Xuyang Wang

+86 18501198877 | wangxy2021@gmail.com

## EDUCATION

**Beijing University of Technology**, Beijing, CHN

*B.E. in Software Engineering, Department of information*

*Sept. 2020 - July 2021(projected)*

**Beihang University**, Beijing, CHN

*Visiting Undergraduate Student, College of Software*

*Sept. 2017 - July 2020*

- **GPA:** Last Three Semesters: 3.61/4.00 **Ranking:** 25/156
- **English:** TOEFL: 108 (S25) **GRE:** Verbal: 153/170 Quantitative: 170/170 Analytical Writing: 3.5/6.0
- **Honors:** The Outstanding Student in 2018-2020, Dean Scholarship in 2019 (Top 5%), First Prize of Social Work Scholarship in 2019, Second-Class Scholarship in 2019, Outstanding Student Cadres in 2017-2019

## RESEARCH EXPERIENCES

**Multi-Encoder Parse-Decoder Network for Sequential Medical Image Segmentation**

*Beijing, CHN*

*Advisor: Prof. Linmi Tao, Tsinghua University, Research Program Member*

*Oct. 2019 – Sept. 2020*

- Proposed a Multi-Encoder Parse-Decoder Network (MEPDNet) for utilizing the spatial continuity information of organs to constraint the sequential medical image segmentation; Created a Lumbar-CT Dataset consisted of 540 grayscale images.
- Built a VA-block to parse and reconstruct fused feature maps for splitting the 2D and 3D spatial continuous information.
- Conducted experiments on three different datasets of Lumbar-CT, MSD-Colon Cancer, and Pancreas-CT to verify our proposed network outperforms state-of-the-art image segmentation models with the least model parameters.

**Aphasia Treatment Assistant System Based on Recommendation and Generation**

*Beijing, CHN*

*Advisor: Prof. Rong Ding, Beihang University, Research Assistant*

*July 2019 - Sept. 2019*

- Forecasted attention level of Aphasia patients through multiple weighted parameters: Classification result of CNN model implemented by PyTorch, Deflection angle of the head and average aspect ratio of both eyes estimated by OpenCV & Dlib.
- Collected and labeled attention-deficit facial image datasets (including 1,200 images) for training in the CNN model.
- The system has been trialed in Beijing Xuanwu Hospital and currently operated well.

## RELATED PROJECTS

**SaaS Platform for Remoting App**, Beihang University, Information System Office

*Team Member, Oct. 2020*

- Constructed a SaaS cloud-based software platform for staff and students to get access to the remote Windows apps.
- Applied Guacamole as the backbone to link the remote apps by loading the remote desktop protocol.
- Implemented the file server using Samba to allocate private storage space for users.
- Mounted SMB shared folder in Windows instances as Network Drive.

**Instant Messaging and Social Networking System**, Beihang University

*Project Manager, June 2020*

- Coordinated a team of 10 in designing an IM system based on Browser/Server architecture and MVVM design pattern.
- Implemented front-end framework with Vue.js, conducted a micro back-end development by Node.js & Express, used Axios to transfer HTTP request, stored data in MongoDB, and achieved messaging functions by Socket.io.

**Image Style Transfer**, Beihang University

*Individual program, Nov. 2019*

- Achieved style transfer by optimization-based method: Implemented pre-trained VGG-19 model on Cambricon MLU100 to extract features of paintings, trained defined content and style loss function, generated the ideal image through model.

**Forecast of Financial Product Purchase**, Beihang University

*Individual Program, Sept. 2019*

- Forecasted financial product purchasing behaviors based on historical user data of the Santander from Kaggle.
- Pre-processed data, divided the users into three categories through K-Means clustering, conducted predictive classification using C4.5 decision tree model, which showed an accuracy of 99%.

**Entertainment-Recommendation Platform**, Beihang University

*Team Member, Aug. 2019*

- Designed a recommendation platform to provide information about books, music, film and TV series.
- Adopted React, GraphQL and ApolloClient as the technology stack of front-end; Used NodeJS to build a back-end server based on Express and ApolloServer; Stored data in MongoDB; Applied bcrypt.js and JWT on user information security.

**Food Recognizing App Based on Deep Learning**, Beihang University

*Team Member, Apr. 2019*

- Developed an Android application to recognize the Chinese dishes and western dishes based on image recognition.
- Expanded the data set above FOOD-101; Trained the Resnet-152 model; Developed server based on EF Core and Nginx
- Optimized the result of the recognition display with an average accuracy of about 70%.

## PUBLICATIONS

- Lei Li, Rong Ding\*, Su Huo, Jiadong Wang, Weiqin Zhao, **Xuyang Wang**. *Aphasia Treatment Assistant System Based on Recommendation and Generation*, 2020 International Conference on Computer Research and Development. Accepted.
- Dachuan Shi\*, Ruiyang Liu, Linmi Tao, Zhanhao Liang, **Xuyang Wang**. *Multi-Encoder Parse-Decoder Network for Sequential Medical Image Segmentation*. Submitted.

## ADDITIONAL INFORMATION

**Computer skills:** Proficient in Python, C++, Java; Familiar with Objective C, Hadoop, Web Framework (Vue, Nodejs, ...)

**Leadership:** Executive Vice President of Beihang University Student Union

**Activities:** AIESEC Global Volunteering Program "Green Paws" in Sri Lanka