

Wenyuan Xue

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Education

Beijing Jiaotong University

PH.D. CANDIDATE IN COMPUTER SCIENCE AND TECHNOLOGY(COMPUTER VISION, DEEP LEARNING)

Beijing, China

Sep. 2015 - Present

Shanxi University

B.E. IN SOFTWARE ENGINEERING

Taiyuan, China

Sep. 2011 - Jul. 2015

Skills

Programming Python, C++

Tools Pytorch, Tensorflow

Be familiar with the deep learning methods related to object detection (Faster RCNN, YOLO, etc), text detection and recognition (CPTN, CRNN, etc). According to the real scenario, I can use these methods to build a primary model and provide optimization based on experimental results. I have a good habit of reading papers and tracing the pioneering works.

Research Experience

Information Extraction from Medical Laboratory Reports

Medical laboratory report is one of the most important clinical data, which helps doctors trace patients' condition and make a diagnosis. In this work, we explore effective methods for textual information extraction from images of medical laboratory reports. The main contributions are:

- An image dataset is available for public, which contains 357 document images for medical laboratory reports and complete annotations.
- CERNET Innovation Project: Automatic Information Extraction from Medical Laboratory Reports in Mobile Internet Environment. (Principal Investigator)
- **Wenyuan Xue**, Qingyong Li, et al. Table Analysis and Information Extraction for Medical Laboratory Reports. The 3rd IEEE Cyber Science Technology Congress, 2018.
- **Wenyuan Xue**, Qingyong Li, et al. Textual Information Extraction from Images of Medical Laboratory Reports with Deep-Learning-Based Approach. (Submitted)

Texts Recognition

Chinese character is a kind of classical hieroglyphics, which is comprised of different strokes. It is observed that Chinese characters are similar locally, which results in wrong prediction and repeated chars in the predicted string. Based on Convolutional Recurrent Neural Network (CRNN), a multi-scale architecture is proposed. The experimental results demonstrate that the proposed method is significantly effective.

- Yulei Zhao, **Wenyuan Xue**, et al. A Multi-Scale CRNN Model for Chinese Papery Medical Document Recognition. The 4th IEEE International Conference on Multimedia Big Data, 2018.

Recovering Semantics of Tables on Images

The form of table can represent densely-packed but structured data. However, it is hard to compile the semantics of tables on images. This work aims at recovering the structured information from complicated table images, which will be beneficial for data mining and data retrieving.

- **Wenyuan Xue**, Qingyong Li, et al. ReS²TIM: Reconstruct Syntactic Structure from Table Images. (Submitting)

Honors & Awards

National Scholarship for Graduate Students

Beijing Jiaotong University

Dec. 2015

Outstanding Graduate, and scholarship

Shanxi University

Sep. 2011 - Jul. 2015