Yu Song

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Education

The University of Texas at Arlington, PhD student	**2018.08 - Now**

- Interest: Deep Learning and Computer Vision (specifically, Medical Image Processing)
- Supervisor: Prof. Junzhou Huang

Institute of Computing Technology, Chinese Academy of Sciences, *Master of Computer Science*	**2015.09 - 2018.06**

- Major in Computer Application Technology
- Supervisor: Assoc. Prof. Hu Han

Shandong University, *Bachelor of Engineering*	**2011.09 - 2015.06**

- Major in Electronic Engineering (GPA Top 15%)
- Received the postgraduate recommendation and cum laude honor of Shandong University

Publication

Scene Text Detection

- Scene Text Detection via Deep Semantic Feature Fusion and Attention-based Refinement (**ICPR 2018**)
- Proposed a new segmentation network with feature fusion mechanism used in the scene text detection scenario
- Using Attention-based Refinement method to further improve the performance.

Experience

Pathology Image to Text Report	**2018.09 - 2018.12**

- Used OCR to generate text from raw report image and refined the report text using regularization techniques (using *Python* based on *Youdao API* and *RegExp*).
- Tokenized both the original Chinese report and the translated English report using for subsequent training (using *Python*, *Google Cloud Translation API*).
- With the processed report data and extracted features of pathology whole slide images (WSI), we trained a caption model that can generate Chinese & English report from WSI (using *Python* based on *PyTorch*).

Pedestrian Navigation Contest	**2016.09 - 2016.12**

- Improved the navigation performance by 18% based on the *Developmental Network Framework* by combining global and local information in different time step for generating navigation information (using *Java*).
- Received the 1st Place award in AIML contest and presented our work at the workshop of IJCNN2017.

News Retrieval System	**2015.10 - 2015.11**

- Built a web spider system based on *Scrapy* framework to crawl 200K+ news on Internets (using *Python* and *MySQL*).
- Built a news retrieval system based on reverse index and used K-means for clustering the search result (using *Java* based on *NLPIR, IK Analyzer* and *Lucene* framework).

RenRen Company (*Algorithm Engineer Intern***)**	**2015.06 - 2015.09**

- Built an image quality assessment system based on the paper: *Convolutional Neural Networks for No-Reference Image Quality Assessment (using C++).*
- Crawled 20k+ images using web spider, and trained a new CNN model with caffe framework for classifying backend images of applications that can reach 75% accuracy (using *Python*).

Engineering Training Center, Shandong University (*TA and Contest participant***)**	**2012.10 - 2013.05**

- Built a prototype of an intelligent bus system with automatic station broadcasting and real-time communication (using *C* based on *SCM*, *2.4G Module*, etc.).
- Built an 3D LED Cube that can displaying Spectrum of music, 3D animation and text (using *C* based on *SCM* and *FFT*).
- Severed as teaching assistant in innovation contests to help with the beginners' projects.

Awards

- AIML *(Artificial Intelligence Machine Learning)* International Contest First Place / National Undergraduate Electronic Design Contest Second Prize / Mechanical and electrical innovation Competition Provincial Grand Prize / Shandong University Innovation Competition First Prize (Trice)
- Chinese Academy of Sciences Student Scholarship / National motivational scholarship (Twice) / Merit Student First-Class Student Scholarship

English *(TOEFL@103)*

- Coursera Global Translator Community (GTC) Volunteer Contributor (reviewer and translator).
- Contribute 20k+ words in two courses: *Improving* Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization and Structuring Machine Learning.