XUEJIAN RONG

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EDUCATION

09/2013-present The City College, City University of New York (CUNY), USA.

Ph.D. Candidate in Electrical Engineering   Expected December 2018
Committee: Yingli Tian (chair), Ioannis Stamos, Jizhong Xiao, Zhigang Zhu
Research Focus: Computer Vision & Image Processing & Machine Learning

09/2009-06/2013 Nanjing University of Aeronautics and Astronautics (NUAA), China.

B.E. in Control Science and Engineering   Outstanding Undergraduate Thesis Award

RESEARCH EXPERIENCE

2016-Present   Visual-Linguistic Understanding on Scene Text Images

Designed new deep neural networks to model the relationship between the scene text instances and context concepts in surrounding environments, which results in better image captioning and visual question answering performance. The proposed framework connects and benefits the Natural Language Processing and Computer Vision research areas.

2013-Present   Scene Text Detection and Recognition in Natural Images

Designed new deep learning based inference algorithms for scene text detection, retrieval, and recognition in the wild, in the presence of image degradations like blur, distortion, noise, cluttered background, etc. Recognized texts in indoor environments usually carry important contextual information which could significantly assist the independent travel of blind or visually impaired persons.

2014-2016   Intelligent Navigation Aid for Visually Impaired Persons

Designed new image deblurring algorithms to remove the degradations in captured indoor videos, then adopted the deblurred videos to perform real-time indoor navigation and automatic destination recognition for the visually impaired people.

2012-2013   MICROSOFT KINECT based 3D Object Recognition for Remote Operation

Designed rendering algorithms to control the Haptic Interaction Point (HIP) to interact with virtual environments created by the depth images captured by KINECT (Microsoft Corp.)

TEACHING EXPERIENCE

2017   EE I2200 Digital Image Processing

Teaching Assistant, The City College, City University of New York.

2017   Deep Learning in Computer Vision

Lecturer, 800+ students, online course on *ChinaHadoop*, the leading AI education platform in China.

SELECTED PUBLICATIONS

Xuejian Rong, Chucai Yi, and Yingli Tian. *Unambiguous Text Localization, Retrieval, and Recognition for Cluttered Scenes*. IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2017. (*Summitted*)

Xuejian Rong, Chucai Yi, and Yingli Tian. *Unambiguous Text Localization and Retrieval for Cluttered Scenes*. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2017. (*Spotlight Presentation*)

Yang Xian, **Xuejian Rong**, Xiaodong Yang, and Yingli Tian. *Evaluation of Low-Level Features for Real-World Surveillance Event Detection*. IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**), 2017.

Xuejian Rong, Bing Li, Aris Arditi, and Yingli Tian. *Guided Text Spotting for Assistive Blind Navigation in Unfamiliar Environments*. International Symposium on Visual Computing (**ISVC**), 2016. (*Oral Presentation*)

Xuejian Rong and Yingli Tian. *Adaptive Shrinkage Cascades for Blind Image Deconvolution*. IEEE International Conference on Digital Signal Processing (**DSP**), 2016. (*Oral Presentation*)

Yuancheng Ye, **Xuejian Rong**, Xiaodong Yang, and Yingli Tian. *Region Trajectories for Video Semantic Concept Detection*. ACM International Conference on Multimedia Retrieval (**ICMR**), 2016.

J. Pablo Munoz, Bing Li, **Xuejian Rong**, Jizhong Xiao, Yingli Tian, Aris Arditi. *Demo: Assisting Visually Impaired People Navigate Indoors*. The 25th International Joint Conference on Artificial Intelligence (**IJCAI**), 2016.

Xuejian Rong, Chucai Yi, Xiaodong Yang, and Yingli Tian. *Scene Text Recognition in Multiple Frames based on Text Tracking*. IEEE International Conference on Multimedia and Expo (**ICME**), 2014.

Xuejian Rong, Chucai Yi, Yingli Tian. *Recognizing Text-based Traffic Guide Panels with Cascaded Localization Network*. ECCV Workshop on Computer Vision for Road Scene Understanding and Autonomous Driving (**CVRSUAD**), 2016.

Bing Li, J. Pablo Munoz, **Xuejian Rong**, Jizhong Xiao, Yingli Tian, Aris Arditi. *ISANA: Wearable Context-Aware Indoor Assistive Navigation with Obstacle Avoidance for the Blind*. ECCV Workshop on Assistive Computer Vision and Robotics (**ACVR**), 2016.

ACADEMIC HONORS

2017	IEEE CVPR, Spotlight Presentation on Scene Text Extraction
2016	IEEE ICME, Doctoral Consortium Travel Award
2013-2017	Graduate Research Fellowship, CUNY
2013	Outstanding Thesis Award, NUAA

SKILLS

Programming Languages	C, C++, Python, Matlab, and Shell with practical experiences
Tools	OpenCV, PyTorch, TensorFlow, PyCharm, LaTeX, GNU Linux

PROFESSIONAL ACTIVITIES

Reviewer	CVPR, ICCV, BMVC, ICIP, ICME, ICDAR, TMM, TIP, MVA, JVCI, etc.

REFERENCES

Yingli Tian	Professor, IEEE Fellow, CUNY. ytian@ccny.cuny.edu
Xiaodong Yang	Research Scientist, NVIDIA Research. xiaodongy@nvidia.com
Chucai Yi	Research Engineer, HERE Maps. chucai.yi@here.com