Jian Ren

Resume

Department of Electrical and Computer Engineering
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https://alanspike.github.io/

Education

2014– 2019 **Ph.D. in Computer Engineering**
Rutgers University, Piscataway, NJ, USA GPA: 3.73/4.00
Advisors: Prof. David J. Foran and Prof. Manish Parashar
Interested Areas: Machine Learning/Deep Learning/Computer Vision/Generative Adversarial Networks/High-Performance Computing/Software Development.

2010–2014 **B.S. in Electronic Science and Technology**
University of Science and Technology of China (USTC).

2012–2012 **Exchange Student in Electrical Engineering**
National Tsing Hua University.

Work Experience

- **Intern, US AI Lab, ByteDance Inc.** *01/2019 - 04/2019*
  - Mentors: Dr. Chen Fang, Dr. Xiaohui Shen, and Dr. Jianchao Yang.
  - Proposed a multi-stages generative adversarial network for human motion re-targeting.
- **Research Assistant, Center for Biomedical Imaging & Informatics, Rutgers** *08/2014 - 01/2019*
  - Worked on segmentation and classification of histology images using deep learning.
  - Proposed a novel LSTM-based prognostic system especially for histology Whole-Slide Images.
- **Intern, Research Lab, Snap Inc.** *06/2017 - 12/2017*
  - Mentors: Dr. Jianchao Yang and Dr. Ning Xu.
  - Proposed adversarial learning algorithms for unsupervised domain adaptation and knowledge distillation on large-scale datasets. US Patent filed.
  - Proposed an evolution algorithm for automatically searching convolutional neural network architectures.
- **Intern, Imagination Lab, Adobe Systems, Inc.** *05/2016 - 05/2017*
  - Mentors: Dr. Xiaohui Shen, Dr. Zhe Lin, and Dr. Radomír Měch.
  - Collected an image aesthetics dataset. Worked on image aesthetics for the personalized recommendation. Shipped the technology to *Aesthetics Filters* in Adobe Stock 2017. US Patent filed.
  - Proposed a ranking algorithm for personal album curation. Shipped the technology to *Auto Curate* in Elements Organizer 2018.
  - Collected a large-scale short video dataset. Proposed a deep ranking approach for the best frame selection from daily short videos. Shipped the technology to *Candid Moments* in Premiere Elements 2018. US Patent filed.
- **Research Assitant, Rutgers Discovery Informatics Institute** *03/2015 - 06/2015*
  - Mentor: Dr. Javier Diaz-Montes.
  - Proposed a parallel histology image segmentation algorithm and deployed it on multiple clustered infrastructures.

Selected Publications

JOURNALS

- **J. Ren**, J. Yang, N. Xu, and D. Foran, "Factorized Adversarial Networks for Unsupervised Domain Adaptation". arXiv:1806.01376. `Sumitted to IEEE Transactions on Neural Networks and Learning Systems`, 2019.
- **J. Ren**, E. Singer, E. Sadimin, D. Foran, and X. Qi, "Statistical Analysis on Survival Models using Feature Quantification on Prostate Cancer Histopathology Images". `Journal of Pathology Informatics`, 2019.
- **J. Ren**, I. Hacihaliloglu, E. Singer, D. Foran, and X. Qi, "Unsupervised Domain Adaptation for Classification of Histopathology Whole-Slide Images". `Frontiers in Bioengineering and Biotechnology`, 2019.
- **J. Ren**, K. Karagoz, M. Gatza, E. Singer, E. Sadimin, D. Foran, and X. Qi, "Recurrence Analysis on Prostate Cancer Patients with Gleason Score 7 using Integrated Histopathology Whole-Slide Images and Genomic

Data through Deep Neural Networks". Journal of Medical Imaging, 2018.

CONFERENCES

- **J. Ren**, X. Shen, Z. Lin, and R. Měch, "Best Frame Selection in a Short Video". Submitted, 2019.
- **J. Ren**, Z. Li, J. Yang, N. Xu, T. Yang, and D. Foran, "EIGEN: Ecologically-Inspired GENetic Approach for Neural Network Structure Searching from Scratch". IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019.
- **J. Ren**, I. Hacihaliloglu, E. Singer, D. Foran, and X. Qi, "Adversarial Domain Adaptation for Classification of Prostate Histopathology Whole-Slide Images". International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 2018, **Oral**.
- **J. Ren**, K. Karagoz, D. Foran, M. Gatza, and X. Qi, "Differentiation among Prostate Cancer Patients with Gleason Score of 7 using Histopathology Image and Genomic Data". In SPIE Medical Imaging, 2018, **Oral**.
- **J. Ren**, X. Shen, Z. Lin, R. Měch, and D. Foran,"Personalized Image Aesthetics". In IEEE International Conference on Computer Vision (ICCV), 2017.
- **J. Ren**, E. Sadimin, D. Foran, and X Qi, "Computer Aided Analysis of Prostate Histopathology Images to Support a Refined Gleason Grading System". In SPIE Medical Imaging, 2017.
- **J. Ren**, J. Diaz-Montes, J. Saltz, T. Kurc, M. Parashar, D. Foran, and X. Qi, "Nuclei Detection Ensemble Workflows across Clustered Infrastructure". HPC workshop associated with International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 2015.
- **J. Ren**, E. Sadimin, D. Wang, J. Epstein, D. Foran, and X. Qi, "Computer Aided Analysis of Prostate Histopathology Images Gleason Grading especially for Gleason Score 7". Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS), 2015.

Patents

- Co-inventor with Jianchao Yang and Ning Xu, "Adversarial network for transfer learning". US Patent Application, filed on 10/2018.
- Co-inventor with Xiaohui Shen, Zhe Lin and Radomír Měch, "Best frame selection in short videos". US Patent Application, filed on 09/2017.
- Co-inventor with Xiaohui Shen, Zhe Lin and Radomír Měch, "Personalized digital image aesthetics in a digital medium environment". US Patent, US20190026609A1.
- Co-inventor with Gang Zhao, Kaixuan Zhu, Dayong Gao and Jianye Wang, "A new temperature control system". China Patent, ZL201210499976.9.

Skills

Languages	Python, C/C++, Java, MATLAB, CUDA, SQL, JavaScript, PHP, LaTeX
Others	Tensorflow, Caffe, PyTorch, Docker, Singularity, OpenMP, MPI, Linux/Unix

Graduate Courses

- Digital Signal and Filters, Convex Optimization, Biosignal Processing, Machine Vision, Pattern Recognition, Linear Algebra and Applications
- Parallel and Distributed Computing/Systems, Software Engineering, Data Structure and Algorithms, Computer Architecture

Awards and Honors

2019	Rutgers School of Graduate Studies Conference Travel Awards.
2018	Winner of Lenovo AI Innovation Challenge, Supercomputing 18'.
2018	MICCAI Student Travel Award.
2014–2019	Research Assistantship, Rutgers University.
2014	Outstanding Undergraduate Thesis (top 3%).
2012, 2013	Outstanding Undergraduate Research Program in 2012 (top 3%) and 2013 (top 1%).
2010 – 2013	Outstanding Student Scholarship.
2009	1^{st} Prize of China Chemistry Olympiad.