Xintong Wang

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EDUCATION

South China University of Technology	**School of Computer Science and Engineering**	**Master of Engineering**
GPA: 3.6/4	Computer Science	09.2016-06.2019
South China University of Technology	**School of Computer Science and Engineering**	**Bachelor of Engineering**
GPA: 3.4/4	Computer Science & Technology	09.2012-06.2016

RESEARCH INTERESTS

- Machine Learning, Deep Learning, Computer Vision, Natural Language Processing
- Distributed Storage and Computing System

PUBLICATIONS

[1]. Min Yang, **Xintong Wang**, Yao Lu, Jianming Lv, Qiang Qu. Generative Adversarial Network for Abstractive Text Summarization with Multi-task Constraint. Submit to ACM Transactions on ... 2018

[2]. **Xintong Wang**, Jianming Lv. Cross-dataset Person Re-Identification Using Similarity Preserved Generative Adversarial Networks. KSEM-18: International Conference on Knowledge Science, Engineering and Management. 2018

[3]. Jianming Lv, Qing Li, **Xintong Wang**. T-CONV: A Convolutional Neural Network For Multi-scale Taxi Trajectory Prediction. BigComp-18: IEEE International Conference on Big Data and Smart Computing. 2018

[4]. HaitaoYang, Jianming Lv, Fei Xu, **Xintong Wang**, Yilin Huang, Lanting Xia, and Xuewu Zhu. Regression Approach for Optimal Purchase of Hosts Cluster in Fixed Fund for Hadoop Big-data Platform. 19th International Conference on Smart City, Transportation and Buildings. 2017

[5]. Jianming Lv, **Xintong Wang**, Fengtao Huang, Junjie Yang. TREST: A Hadoop Based Distributed Mobile Trajectory Retrieval System. DSC-16: IEEE International Conference on Data Science in Cyberspace. 2016

[6]. Haibiao Lin, Jianming Lv, Can Yang, Miaoyi Deng, Kaitao Wang, **Xintong Wang**. GPS Trajectory Mining : a Survey. In Journal of Computational Information Systems: Vol. 10 (16). 2014

Underline Means Equal Contribution.

RESEARCH EXPERIENCE

Revise, Refine, Polish: Coarse-to-Fine Learning for Abstract Summarization   Comp@PolyU

Supervised by Prof. Wenjie Li, The Hong Kong Polytechnic University   *Sep. 2018 - Feb. 2019*

We proposed a coarse-to-fine multi-stage prediction framework for abstract summarization, composed of multiple decoders each of which operates on the output of the previous stage, producing increasingly refined summaries. Our proposed learning approach addresses the difficulty of vanishing gradients during training by providing a learning objective function that enforces intermediate supervisions. Particularly, we optimize our model with a reinforcement learning approach which utilizes the output of each intermediate decoder's test-time inference algorithm as well as the output of its preceding decoder to normalize the rewards, which simultaneously solves the well-known exposure bias problem and the loss-evaluation mismatch problem.

Generative Adversarial Network for Abstractive Text Summarization   SIAT@CAS

Supervised by Prof. Min Yang, Chinese Academy of Sciences   *Mar. 2018 - Sep. 2018*

We proposed an adversarial process for abstractive text summarization, in which we simultaneously train a generative model as an agent of reinforcement learning, which takes the raw text as input and predicts the abstractive summarization and a discriminative model which attempts to distinguish the generated summary from the ground truth summary.

Experiments shows that our model is able to generate abstractive, readable and diverse summaries.

The paper has been submitted to ACM Transactions on Intelligent Systems and Technology.

Cross-dataset Person Re-Identification Using Similarity Preserved Generative Adversarial Networks.
Intelligent Information Fusion Lab@SCUT

Supervised by Prof. Jianming Lv, South China University of Technology   *Sep. 2017 - Jan. 2018*

Due to the expensive cost of data labeling, most of the proposed Re-ID algorithms conduct supervised learning on small labeled datasets. Directly deploying these trained models to the real-world large-scale camera networks may lead to a poor performance. We address this cross-dataset Re-ID challenge by transforming the unlabeled images in the target domain to fit the classifier using our proposed similarity preserved generative adversarial networks model.

Comprehensive experiments based on real datasets indicate that our model is better than the state-of-the-art cross-dataset unsupervised transfer learning algorithm.

The paper has been accepted by KSEM. Full paper (Acceptance rate of 23%).

A Convolutional Neural Network For Multi-scale Taxi Trajectory Prediction.
Intelligent Information Fusion Lab@SCUT

Supervised by Prof. Jianming Lv, South China University of Technology   *Sep. 2016 - Sep. 2017*

We propose TCONV which models trajectories as two-dimensional images, and adopts multi-layer convolutional neural networks to combine multi-scale trajectory patterns to achieve precise prediction. Furthermore, we integrate multiple local enhancement convolutional fields to explore these important areas deeply for better prediction.

Comprehensive experiments based on real trajectory data show that T-CONV can achieve higher accuracy than the state-of-the-art methods.

The paper has been accepted by BigComp. Full paper.

Hadoop Based Distributed Mobile Trajectory Retrieval System.
New Media Lab@SCUT

Supervised by Prof. Jianming Lv, South China University of Technology   *May. 2015 - Sep. 2016*

We develop a mobile trajectory retrieval system named TREST, which is based on the distributed Hadoop and HBase systems. TREST makes use of the horizontal expansion mechanism of Hadoop to store overwhelming spatio-temporal trajectories, and supports frequent incremental insertion of data stream. Meanwhile, TREST maps the spatio-temporal features of trajectories into the simple key-value schema of HBase to support fast retrieval.

Experiments on this data set show that TREST can efficiently support both Single-track and All-track retrieval within milliseconds on average.

The paper has been accepted by DSC. Full paper.

SCHOLARSHIPS / AWARDS

- **South China University of Technology Research Scholarships**   2017, 2018, 2019
  This scholarship is awarded to the outstanding students in the university.
- **Hongping And Changqing Scholarships**   2016
  This scholarship is awarded to the outstanding students with excellent performance in academic competitions.
- **Tencent Scholarship of the Science and Technology (Rank 1st)**   2016
  This scholarship is awarded to the outstanding students with excellent academic performance.
- **Anju Bao Scholarship of the Science and Technology (Rank 1st)**   2016
  This scholarship is awarded to the outstanding students with excellent academic performance.
- **South China University of Technology Scholarships**   2015
  This scholarship is awarded to the outstanding students in the university.
- **Merit Student of South China University of Technology**   2015
  This award is awarded to the outstanding students with excellent performance in academic and leadership.
- **Honorable Mention of Mathematical Contest In Modeling Certificate of Achievement**   2015
  Awarded by the Consortium for Mathematics and Its Application, USA.
- **Gold Prize in National COMAP's Computer Software Design Contest.**   2015
  Awarded by the China Computer Federation, China.

PROGRAMMING SKILLS

- Computer Language: **Python,** C++, Java
- Develompment Software: **Pycharm, Eclipse, Ipython notebook**
- Database Software: **MySQL, Oracle, HBase, Hive**
- Toolkit for Data Analysis: **Numpy, Pandas, Matplotlib, Seaborn, NLTK, Sklearn**
- Framework for Deep Learning: **Pytorch, Tensorflow, Keras**
- Framework for Distributed Computing: **Hadoop, Spark**
- Editing Software: **Word, Excel, PowerPoint, Latex**