Denghui Zhang

Rutgers University, NJ, US

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Educations

Rutgers University, New Jersey   *Sep. 2018 - Now*

- Ph.D. in Information Technology, member of Rutgers Data Mining Group
- Advisor: Prof. Hui Xiong

Insititute of Computing Technology, Chinese Academy of Sciences, Beijing   *Sep. 2015 - Jun. 2018*

- M.S. in Computer Science and Technology, at CAS Key Laboratory of Network Data Science and Technology
- Advisor: Prof. Jun Xu, and Prof. Yuanzhuo Wang

University of Science and Technology Beijing, Beijing, China   *Sep. 2011 - Jun. 2015*

- B.E. in Electronic Engineering, at School of Computer and Communication Engineering
- National Scholarship (Top 2%)

RESEARCH INTEREST

General: Data Mining, Natural Language Understanding, Knowledge Graph
Applications: Representation Learning for Talent Analysis, Spatio-temporal Modeling

Publications

Preprint   ***E-BERT: A Phrase and Product Knowledge Enhanced Language Model for E-commerce***
Denghui Zhang, Yanchi Liu, Fuzhen Zhuang, Hui Xiong
arXiv:2009.02835

ICDM'20   ***T^2-Net: A Semi-supervised Deep Model for Turbulence Forecasting***
Denghui Zhang, Yanchi Liu, Wei Cheng, Bo Zong, Jingchao Ni, Z Chen, Haifeng Chen, Hui Xiong
The 20th IEEE International Conference on Data Mining, 2020.

SIGIR'20   ***Spatio-Temporal Dual Graph Attention Network for Query-POI Matching***
Zixuan Yuan, Hao Liu, Yanchi Liu, **Denghui Zhang**, Fei Yi, Nengju Zhu, Hui Xiong
The 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval
(SIGIR), 2020. *(long paper, accepted)*

CIKM'19   ***Job2Vec: Job Title Benchmarking with Collective Multi-View Representation Learning***
Denghui Zhang, Junming Liu, Hengshu Zhu, Yanchi Liu, Lichen Wang, Pengyang Wang, Hui Xiong
The 28th ACM International Conference on Information and Knowledge Management (CIKM), 2019.
(regular paper, accepted)

AAAI'18   ***Path-Based Attention Neural Model for Fine-Grained Entity Typing***
Denghui Zhang, Manling Li, Pengshan Cai, Yantao Jia, Yuanzhuo Wang
The Thirty-Second AAAI Conference on Artificial Intelligence, 2018. *(poster, accepted)*

WI'17   ***Efficient Parallel Translating Embedding For Knowledge Graphs***
Denghui Zhang, Manling Li, Yantao Jia, Yuanzhuo Wang, Xueqi Cheng
The IEEE/WIC/ACM International Conference on Web Intelligence, 2017. *(regular paper, accepted)*

IEEE Trans. ***Link Prediction in Knowledge Graphs: A Hierarchy-Constrained Approach***
Manling Li, **Denghui Zhang**, Yantao Jia, Yuanzhuo Wang, Xueqi Cheng
IEEE Transaction on Big Data Special Issue on Knowledge Graphs: Techniques and Applications, 2017.
(*regular paper*)

Experience

Data Science Department, NEC Laboratories America *May. 2020 - August. 2020*
Research Intern *Supervisor: Yanchi Liu*

- **Product semantic modeling:** Proposed to adapt pre-trained language models such as BERT for learning contextual product representations, applying the product representations for a series of e-commerce downstream tasks, i.e., product matching, categorization, product search, etc.

Data Science Department, NEC Laboratories America *May. 2019 - August. 2019*
Research Intern *Supervisor: Yanchi Liu*

- **Spatio-temporal traffic volume prediction:** Proposed Spatio-Temporal Multi-Scale Multi-Granularity Network (ST-MSGN) for site-level traffic volume prediction, by modeling the complex spatial and temporal dependencies and their interactions. Conduct experiments on two real-world datasets (NYC-Bike and NYC-Taxi) to validate the effectiveness of the proposed model.
- **Turbulence forecasting:** Proposed a semi-supervised deep model, T^2-Net, for turbulence forecasting. T^2-Net applies ConvLSTM for spatio-temporal correlation learning, and utilize a novel Dual Label Guessing module to generate pseudo labels to remedy the label scarcity issue.

Baidu Talent Intelligence Center *June. 2018 - August. 2018*
Research Intern *Supervisor: Hui Xiong*

- **Resume distribution:** Developed resume recommender system for Baidu HR department, using NLP techniques to obtain the resume-job similarities and distribute resumes according to similarity scores and the headcount of different departments.
- **Representation learning for job title analysis:** Developed a multi-view representation approach to match job titles with similar expertise levels across various companies.

Skills

Language	Python, C/C++, Java, Scala, MySql, Shell
Tools	Keras, PyTorch, Tensorflow, Spark MLlib, Sklearn, Pandas