Jixuan Wang

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RESEARCH INTERESTS
- Natural Language Understanding, Conversational AI
- Speaker Recognition/Diarization, Speech Recognition
- Graph Neural Networks
- Applications in Healthcare

EDUCATION

University of Toronto, Toronto, Canada — SEPT. 2016 - PRESENT
DOCTOR OF PHILOSOPHY
Major: Computer Science
Adviser: Prof. Michael Brudno, Prof. Frank Rudzicz
Research topic: Building an intelligent interface for clinical note-taking utilizing speech, natural language processing and mobile devices.

Harbin Institute of Technology, Harbin, China — SEPT. 2010 - JUN. 2016
BACHELOR/MASTER OF ENGINEERING
Major: Software Engineering

PUBLICATIONS

Encoding syntactic knowledge in transformer encoder for intent detection and slot filling.
Jixuan Wang, Kai Wei, Martin Radfar, Weiwei Zhang, Clement Chung.
To appear in AAAI 2021

Speaker attribution with profiles by graph-based semi-supervised learning.
Jixuan Wang, Xiong Xiao, Jian Wu, Ranjani Ramamurthy, Frank Rudzicz, Michael Brudno.
INTERSPEECH 2020

Speaker diarization with deep speaker embedding refined by graph neural networks.
Jixuan Wang, Xiong Xiao, Jian Wu, Ranjani Ramamurthy, Frank Rudzicz, Michael Brudno.
ICASSP 2020

Training without training data: Improving the generalizability of automated medical abbreviation disambiguation.
Marta Skreta, Arbabi Arbabi, **Jixuan Wang**, Michael Brudno.
Machine Learning for Health (ML4H) Workshop at NeurIPS 2019

Centroid-based deep metric learning for speaker recognition.
Jixuan Wang[†], Kuan-Chieh Wang[†], Marc Law, Frank Rudzicz, Michael Brudno.
ICASSP 2019

Customizable facial gesture recognition for improved assistive technology.
Kuan-Chieh Wang, **Jixuan Wang**, Khai Truong, Richard Zemel.
AI for Social Good Workshop at ICLR 2019.

ERDS-exome: a hybrid approach for copy number variant detection from whole-exome sequencing Data.
Renjie Tan[†], **Jixuan Wang**[†], Xiaoliang Wu, Liran Juan, Likun Zheng, Rui Ma, Qing Zhan, Tao Wang, Shuilin Jin, Qinghua Jiang, Yadong Wang.
IEEE/ACM Trans Comput Biol Bioinform. 2017. doi: 10.1109/TCBB.2017.2758779.

Extending gene ontology with gene association networks.
Jiajie Peng, Tao Wang, **Jixuan Wang**, Yadong Wang, Jin Chen.
Bioinformatics. 2016. doi: 10.1093/bioinformatics/btv712.

LncRNA2Target: a database for differentially expressed genes after lncRNA knockdown or overexpression.
Qinghua Jiang, **Jixuan Wang**, Xiaoliang Wu, Rui Ma, Tianjiao Zhang, Shuilin Jin, Zhijie Han, Renjie Tan, Jiajie Peng, Guiyou Liu, Yu Li, Yadong Wang.
Nucleic Acids Research. 2015. doi: 10.1093/nar/gku1173.

LncRNA2Function: a comprehensive resource for functional investigation of human lncR-NAs based on RNA-seq data.
Qinghua Jiang, Rui Ma, **Jixuan Wang**, Xiaoliang Wu, Shuilin Jin, Jiajie Peng, Renjie Tan, Tianjiao Zhang, Yu Li, Yadong Wang.
BMC Genomics. 2015. doi: 10.1186/1471-2164-16-S3-S2.

TF2LncRNA: Identifying Common Transcription Factors for a List of lncRNA Genes from ChIP-Seq Data.
Qinghua Jiang, **Jixuan Wang**, Yadong Wang, Rui Ma, Xiaoliang Wu, Yu Li.
Biomed Res Int. 2014. doi: 10.1155/2014/317642.

WORKING EXPERIENCE	Applied Scientist Intern	JUN. 2020 - DEC. 2020

WORKING EXPERIENCE

Applied Scientist Intern   JUN. 2020 - DEC. 2020
Amazon Alexa, Toronto, Canada
Working on integrating syntactic knowledge into Transformer for slot filling and intent detection.

Research Intern   JUN. 2019 - SEPT. 2019
Microsoft Research, Redmond, US
Working on the EmpowerMD project, focusing on speaker diarization for patient-doctor conversations using graph-based methods.

OTHER AFFILIATIONS

Vector Institute, Toronto, Canada   NOV. 2017 - PRESENT
Research Student

Hospital for Sick Children, Toronto, Canada   SEP. 2016 - PRESENT
Research Student

AWARDS AND HONORS

RBC Graduate Fellowship ($50,000 over 2 years)   JAN. 2020
C.C. Gotlieb (Kelly) Graduate Fellowship ($500)   DEC. 2019
Outstanding Graduate of Harbin Institute of Technology   MAY 2014/2016
The Guanghua Educational Scholarship (2/61)   NOV. 2015
Outstanding Graduate Student Scholarship (Top 5%)   DEC. 2014

TEACHING EXPERIENCE

CSC411 **Machine Learning and Data Mining**, University of Toronto
WINTER 2019, WINTER 2018, FALL 2017, WINTER 2017
CSC373 **Algorithm Design, Analysis and Complexity**, University of Toronto
FALL 2018, SUMMER 2017, FALL 2016

TECHNICAL SKILLS

PYTHON (Numpy, SciPy), PyTorch, TensorFlow, JAVA, SWIFT/OBJECTIVE-C
C# (UWP), BASH SCRIPT, J2EE, JAVASCRIPT, CSS