

Zhu Wang

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Research Interests	My research interests are primarily in Deep Learning models and Graph Mining. Particularly, I am working on their interdisciplinary field therein to solve image classification, object detection and ontology matching related tasks.	
Skills	<ul style="list-style-type: none">• Language/Script: JAVA, Python, PHP, SQL, R, JavaScript, XML• Tools: TensorFlow, PyTorch, OWL API, RDFlib, Neo4j, Maven, MongoDB, Spark	
Education	University of Illinois at Chicago	Expected 05/2023
	Doctor of Philosophy , Computer Science, Advisor: Dr. Isabel Cruz(<i>deceased</i>)	
	University of Pittsburgh	08/2013 - 05/2015
	Master of Science , Information Science	
Research Experience	Northeastern University, China	09/2008 - 06/2012
	Bachelor of Management , Information Management and System	
	Research Assistant , AIOpt Lab, University of Illinois at Chicago	11/2021 - now
	Knowledge Graph Attention for Boosting Vision Transformers <ul style="list-style-type: none">• Working on Knowledge Graph attention image classification on ImageNet with torch• Working on Knowledge Graph based data augmentation and visual relations	
Research Experience	Research Assistant , ADVIS Lab, University of Illinois at Chicago	08/2016 - now
	Knowledge Graph Embedding with Bootstrapping for Deep Matching <ul style="list-style-type: none">• Developed a new ontology matching system called AgreementMakerDeep• Applied several knowledge graph embedding methods with Tensorflow	
	Impact of COVID-19 on Education Based on Geotagged Twitter <ul style="list-style-type: none">• Collected millions of COVID19 education related Geotagged Twitter dataset• Learned dataset via spatio-temporal patterns, sentiment analysis and content analysis with topic modelling	
	Visual Analytics for Ontology Matching <ul style="list-style-type: none">• Built a Visual Analytics panel and re-design the interfaces of AgreementMaker• Learned ontology alignments with user interaction and user study	
Research Experience	Exploring Yelp Data to Predict Foodborne Illness in Chicago Area <ul style="list-style-type: none">• Worked on language models and predictions models for preventing foodborne illness using Yelp dataset as part of “Chicago SmartData Platform”• Implemented kinds of prediction models and network anomaly detections	
	Research Assistant , Pittsburgh Computational Social Science Lab	05/2015 - 03/2016
	The Evolution of Scientific Productivity of Junior Scholars	
	<ul style="list-style-type: none">• Developed research methods and techniques for scholarly knowledge discovery	

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- Implemented link predictions of junior scholars with senior scholars using similarity algorithms and models

Work Experience

- Teaching Assistant**, University of Illinois at Chicago 2016 - now
 Courses: Program Design I & II, Introduction to Data Science, Introduction to Machine Learning, Database Systems, Data and Web Semantics
- Software Engineer**, RJ. Lee Group, INC, Monroeville, PA 05/2015 - 06/2016
- Developed automated configuration tools embedded in web-based laboratory software products
 - Full-stack development of an IOS application to track and analysis nutrition daily intake
- Data Analyst**, China Foundation Center, China 09/2012 - 06/2013
- Re-built and designed relational database to store all Chinese foundations information
 - Analyzed different classified foundations development trends and published reports to customers

Other Projects

- Prediction and monitoring of Safe-Driving Behaviors** 02-05/2019
- Developed a system to detect eyes closeness and distracted behaviors
 - Implemented facial recognition and behaviors detection using CNN and DNN with PyTorch
- Collective Behavior During Emergencies and Other Exogenous Events** 05-12/2015
- Worked on issues and challenges relating to emergency understanding using largescale data generated by hundreds of millions of users
 - Implemented time series analysis and sentiment analysis of Tweets related with emergencies
- Hadoop: Movie Tagging and Recommendations** 01-05/2015
- Developed a web application to tagged amazon movies and recommend movies for users by their previous ratings and reviews
 - Implemented text mining and user-based recommend algorithms using MapReduce on Hadoop

Selected Publications

- [1] Wang, Zhu, and Isabel F. Cruz. AgreementMakerDeep Results for OAEI 2021. In OM@ISWC 2021.
- [2] **Wang, Zhu**, and Isabel F. Cruz. Analysis of the impact of covid-19 on education based on geotagged twitter. Proceedings of the 1st ACM SIGSPATIAL International Workshop on Modeling and Understanding the Spread of COVID-19. 2020.
- [3] **Wang, Zhu**, Booma Sowkarthiga Balasubramani, and Isabel F. Cruz. Predictive analytics using text classification for restaurant inspections. Proceedings of the 3rd ACM SIGSPATIAL Workshop on Smart Cities and Urban Analytics. 2017.

Awards

- Graduate Student Council Travel Award, University of Illinois at Chicago 2018
- Graduate SIS Scholarship, University of Pittsburgh 2015