Weichuan Wang

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Education Background

Wuhan University (WHU), Wuhan, China   09/2019-06/2022

Master of Engineering in Computer Science and Technology   **GPA:** 90.18/100

Wuhan University (WHU), Wuhan, China   09/2015-06/2019

Bachelor of Engineering in The Internet of Things Engineering   **GPA:** 3.72/4.0   **Ranking:** 1/24

Research Interests

Artificial Intelligence; Natural Language Processing; Knowledge Graph; Deep Learning

Patents

➢ *A Music Copy Generation Approach Based on Word Mover's Distance Combined with Word Embedding*, Patent No.: 201811525805.2, under review

➢ *An Intelligent Desk Lamp Supervising Children's Healthy Learning*, Patent No.: 201910002456.4, under review

➢ *Link Prediction Method, Device, Equipment and Storage Medium Based on Knowledge Graph*, Patent No.: 202110739050.1, under review

Research Experiences

Intelligent Information Recommendation and Interactive Question Answering System Based on Knowledge Graph of Geological Disasters from Mountain Torrents (China Meteorological Administration Project)   08-11/2020

➢ Conducted data survey of knowledge graph, extracted knowledge and crawled meteorological-related data, designed and trained knowledge graph embedding (KGE) models, supplemented missing entities with link prediction

➢ Took charge of situation and data research on knowledge graph in meteorological service field, structure of knowledge graph designing, project framework writing, project schedule management and task allocation

➢ Explored the latest techniques of recommendation system based on knowledge graph, and used KGE to recommend meteorological knowledge and completed interface designing

➢ Accessed weather forecasts through weather API, collected Q&A corpus, trained BERT-based BiLSTM-CRF model to finish named entity recognition (NER), collaboratively designed scenario based interactive algorithm in meteorological module, tested system effect from aspects of responding speed, Q&A satisfaction, recommendation correlation and novelty

Construction of COVID-19 Knowledge Graph and Link Prediction of Q&A Evaluation on Antiviral Drug Graph, CCKS2020   07- 11/2020

➢ Designed and employed MDistMult model for link prediction based on the COVID-19 antiviral drugs knowledge graph (CADKG), and compared prediction metrics including mean rank (MR), mean reciprocal rank (MRR) and hit @N(N=1, 3, 10) with baselines (TransE, ConvE, DistMult, SimplE, RotatE, TuckER, etc.)

➢ In charge of coding and training baseline models, writing CCKS evaluation paper

➢ MDistMult model proposed by us has achieved the state-of-the-art on the CADKG and won the first prize in the competition

Chinese Language Task-based Interaction Classification System   08/2019

➢ Obtained sentence embedding of corpus through BiLSTM-CRF model, and inputted into GANs model, and designed ODD detector and domain classifier to identify the data in or out of domain and classify data in domain

➢ Responsible for project plan designing, model designing, partial code writing and final presentation

➢ Awarded the First Place in The 9th Huawei Cup China College Students Intelligent Design Competition and the Second Place of Huawei's special honor

Electronic Medical Record (EMR) Extraction System Based on BiGRU-CRF   07-08/2019

➢ Integrated sequential information of EMR using deep neural networks, combined BiGRU model with CRF

- ➢ Took charge of plan writing, code writing, parameters tuning
- ➢ Awarded the Second Place in The 12th China College Students Computer Design Contest

Design of an Intelligent Desk Lamp for Children   07/2018
- ➢ Designed the lamp with CNN model and Raspberry Pi 3 to supervise children's sitting posture while learning
- ➢ Responsible for project plan designing, hardware data getting and optimizing and final presentation
- ➢ Awarded the Second Place in The 11th China College Students Computer Design Contest

Gesture Recognition Based on CNN Model Combined with Attitude Sensor   08/2017
- ➢ Processed static treatment of gesture photos with CNN model and OpenCV, got quaternion of gesture from attitude sensor to recognize the basic sign language information
- ➢ Took charge of part of plan designing and writing, programming, hardware data getting, effect testing, system optimization and final presentation
- ➢ Awarded the First Place in Central China and Southwest District, China College Students Internet of Things Design Competition

Extra-Curricular Activities

Director, Psychology Department, WHU School of Computer Science Graduate Student Union   09/2019-06/2020
- ➢ Responsible for the popularization of psychological knowledge among the graduate students in the WHU
- ➢ Organized several activities themed on psychology, such as Mental Health Day, etc.

Director, Secretariat, WHU School of Computer Science Volunteer Association   09/2015-06/2017
- ➢ Took charge of member information and funds management and volunteers scheduling
- ➢ Planned and organized various volunteering and charity activities to help the needed including senior citizens, and children in the mountain area, etc.
- ➢ Launched and took part in a variety of volunteering activities to enhance the influence of association, such as providing services in Wuhan Marathon

Director, Life Rights Department, WHU School of Computer Science   09/2015-06/2017
- ➢ Responsible for solving the life rights issues for the students of WHU
- ➢ Collected main problems and provided feedback to school
- ➢ Organized some activities, like Dormitory Culture Day, etc.

Honors & Awards
- ➢ Excellent Graduate, Wuhan University   12/2020
- ➢ First-class Scholarship for Excellent Academic Performance, Wuhan University   12/2020
- ➢ Outstanding Individual, Wuhan University   01/2020
- ➢ Excellent Undergraduate, Wuhan University   05/2019
- ➢ Scholarship for Excellent Student, Wuhan University   01/2018
- ➢ Activist in Social Activities, Wuhan University, twice   2017, 2020
- ➢ National Scholarship, twice   2017, 2018
- ➢ First-class Scholarship for Excellent Student, Wuhan University, twice   2016, 2018
- ➢ Merit Student, Wuhan University, three times   2016, 2018
- ➢ Outstanding Youth Volunteer   12/2016
- ➢ The Third Prize of The 13th E-Cultural Festival, Wuhan University   09/2016
- ➢ Excellent Communist Youth League Member, Wuhan University   05/2016
- ➢ Third-class Scholarship for Freshman, Wuhan University   12/2015

Skills & Hobbies

Programming: Python, Pytorch,Tensorflow, LaTex, SQL, C, C#, Markdown

Tools: Jupyter Notebook, Linux, Pycharm, Git, Neo4j, VS Studio

Hobbies: Enjoying long-distance running, playing badminton and writing fiction