

Yuxiang Wang

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EDUCATION

- **Southwest University** Chongqing, China
• *Bachelor of Engineering - Computer Science and Technology; GPA: 3.9/5.0 (15/120) September 2016 - June 2020*
- **Johns Hopkins University** Baltimore, US
• *Master of Engineering - Data Science; GPA: 4.0/4.0 September 2020 - June 2022 (expected)*

PUBLICATIONS

- Y. Wang, Y. Zhang, X. Li, Xinyao Yu, "COVID-19 Fake News Detection Using Bidirectional Encoder Representations from Transformers Based Models", submitted to International Conference on Neural Information Processing (ICONIP), 2021.
- W. Wang, J. Cai, J. Xu, Y. Wang, Y. Zou, "Prediction of the COVID-19 Infectivity and the Sustainable Impact on Public Health under Deep Learning Algorithm," submitted to Soft Computing, 2021.
- Y. Wang, "Academic Supervision and Risk Assessment Based on Moodle LMS Data," 2019 International Conference on Robots & Intelligent System (ICRIS), 2019, pp. 261-264.
- Y. Wang, "Prediction of PM2.5 Concentration in Chengdu Based on Improved BP Neural Network," International Conference on Machinery, Materials and Computing Technology (ICMMCT), 2019, pp. 103-108.
- Y. Wang, "Development of Machine Dictionary for Natural language Processing," China Computer and Communication, 2019, 000.015: pp. 37-38.
- Y. Wang, "Handwriting Numeral Recognition Based on R Language," PC Fan, 2018, 08: pp. 224.

PATENTS

- **Improved Computer Monitor:** Yuxiang Wang. Appearance Invention Patent (April 2019)
- **Jianzhisheng College Student Part-time Job System V1.0:** Yuxiang Wang, Zhengtong Tan, Zipeng Li. Software Copyright (February 2019)
- **Student self-management system V1.0:** Yuxiang Wang. Software Copyright (November 2017)

PROJECTS

- **Named Entity Recognition on IEEE Xplore scholarly documents (June 2021-August 2021)**
 - Specialized in abstracts within sub-fields of the CS field and designed our own annotation scheme
 - Pre-trained a BERT-based model using IEEE corpus and explored other deep learning models, for example, XLNET and GPT-3 to further improve the performance of existing models
 - Explored the CRF task as a sub-project using the SetSimilarity plus Bert-based embedding approach
- **Covid-19 Fake News Detection using BERT (May 2021)**
 - Fine-tuned the pre-trained BERT model as our base model
 - Added BiLSTM and CNN layers on the top of fine-tuned BERT model with frozen parameters and not frozen parameters methods respectively
- **Detector of Offensive Language and Hate Speech for Tweet (November 2020)**
 - Preprocessed tweet text using skip-gram based word2vec method, LIWC, and LDA feature extraction
 - Combined extracted features with SVM, logistics, and neural network models to achieve text multi-classification tasks
- **Studied on Heat Transfer Model of Multilayer Insulation Clothing (September 2019)**
 - Constructed a model that determined the value of each threshold by establishing partial differential equation models for existing data
 - Used the model for a series of predictions and analyses
- **LMS Prototype of Student Performance Predication Model (September 2018-June 2019)**
 - Applied skills of processing and analyzing big data (included data mining, multiple linear regression and correlation analysis, etc.)
 - Analyzed students' scores, class times and failure rates, and the data came from a platform that already running in certain universities in Chongqing
- **Influence Model of Bicycle Sharing on the City (November 2018)**
 - Evaluated the development status of shared bicycles in New York City from multiple dimensions such as transportation and economy, mainly using analytic hierarchy process (AHP) to build a model
 - Used the model to predict trends in future of shared bikes and predicted the status if there is no shared bicycles
 - Analyzed the impact of shared bicycles specifically on the economic development and establishing a corresponding model based on a weighted function which defined by ourselves
- **Jianzhisheng College Student Part-time Job System (June 2018)**

- Undertook the development work of the system front-end interaction, mainly using PHP language with SQL Server to store data
- Debugged the system and tested its functions
- **Restoration of Motion Blur Pictures (May 2018)**
 - Explored the restoration of motion blurred images and detected the fuzzy region and extracted them
 - Restored the images by filtering related methods (included Butterworth filter, Radon transformation, etc.)
 - Took responsibility for creation and finding solutions of point extension functions and writing related documents
- **Intelligent Lighting—Automatic Coloring and Restoration System for Old Photos (May 2018)**
 - Made the implementation of the system, which was mainly based on the training of a large number of sample pictures by convolutional neural networks
 - Enabled automatic coloring or restoration of old photos, as well as black and white comics coloring (This system had a certain commercial value)
 - Undertook the market demand research of the platform and completed the front pages implementation
- **University-sponsored Scholarly Exchange to Auckland University (July 2018)**
 - Studied some CS-related courses in the Department of Computer and Statistics of the University of Auckland, including R language data analysis, data mining, etc
 - Participated in the project team about handwritten digit recognition (won the honor of the excellent team)
 - Used three methods to solve related problems, which were linear fitting, logistic regression and kernel regression by R language platform with high prediction accuracy
- **Search Extension Project (September 2017-January 2018)**
 - Collected some course information of Netease Online Open Courses through python crawler
 - Used natural language processing related methods: word segmentation, doc2vec to classify and sort the collected data
 - Encapsulated the results into API, through which users can call this whole project and enter keywords to get the most suitable course information

HONORS AND AWARDS

- Outstanding Graduate of Southwest University - May 2020
- First Class Scholarship of Southwest University - 2017-2019
- Merit Student of Southwest University - 2017-2019
- Second Class Scholarship of Southwest University - 2016-2017
- Provincial Second Prize in China Undergraduate Mathematical Contest in Modeling - September 2019
- Honor Prize in Asia and Pacific Mathematical Contest in Modeling - November 2018
- Second Prize in Chongqing Database Programming Competition - June 2018
- First Prize in Mathematical Modeling of SWU - May 2018
- Provincial First Prize in China College Student “Innovation, Originality and Entrepreneurship” Challenge - May 2018

INTERNSHIP EXPERIENCE

- **Oracle Chengdu Branch** Information Analyst
July 2019 - August 2019
 - **Data Processing and Visualization:** Studied the processing methods (ADW through sql developer) and data visualization of big data (Oracle DV)
 - **Data Analysis:** Participated in the data analysis of the road traffic accident details in a certain area in 2018 and the registration data analysis of a certain hospital in Chengdu
 - **Results:** Completed the above two projects and made the analysis reports for the relevant companies
- **Chengdu Calabar Information Technology Corp., Ltd.** Computer Technician
July 2018 - August 2018
 - **NLP Related Learning:** Studied related technologies of natural language processing in the development department
 - **Results:** Participated in the establishment of the knowledge graph system framework in the department

CAMPUS INVOLVEMENT

- **Director** SWU, China
Students' Association Union of SWU *September 2017 - May 2018*
- **Core Member** SWU, China
Students' Association Union of SWU *September 2016 - May 2017*
- **Core Member** SWU, China
Students Union of SWU *September 2016 - May 2017*

SKILLS

- **Languages:** Python, R, C, C++, HTML, CSS, PHP, JAVA, SQL, C#, assembly language
- **Frameworks:** Pytorch, Scikit, NLTK, SpaCy, Keras, NodeJS
- **Tools:** Docker, GIT, MySQL, SQL Server, Visual Studio, Anaconda, MyEclipse, Rstudio, Wampserver
- **Platforms:** Linux, Windows, Ubuntu, AWS, Tencent Cloud, Oracle ADW
- **Soft Skills:** Teamwork, Leadership, Event Management, Writing, Public Speaking, Time Management