# **Yuxiang Wang**

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### **EDUCATION**

Johns Hopkins University, Baltimore, US | Sept 2020 – Jun 2022

Whiting Engineering School
 Degree: Master of Engineering

Major: Data Science

Southwest University (SWU), Chongqing, China | June 2020

College of Computer & Information Science
 Degree: Bachelor of Engineering

Major: Computer Science and Technology GPA: 3.91/5.0

## **PUBLISHED PAPERS**

- Yuxiang Wang, Yongheng Zhang, Xuebo Li, Xinyao Yu, COVID-19 Fake News Detection Using Bidirectional Encoder Representations from Transformers Based Models, submitted on ICONIP 2021;
- Weiwei Wang; Jinghui Cai; Jiali Xu; Yuxiang Wang; Yulin Zou, Prediction of the COVID-19 Infectivity and the Sustainable
   Impact on Public Health under Deep Learning Algorithm, submitted on Soft Computing(SOCO);
- Yuxiang Wang, Academic Supervision and Risk Assessment Based on Moodle LMS Data, published on ICRIS International Conference released on EI, 2019;
- Yuxiang Wang, Prediction of PM2.5 Concentration in Chengdu Based on Improved BP Neural Network, published on immoct International Conference, 2019;
- Yuxiang Wang, Handwriting Numeral Recognition Based on R Language, published on PC Fan, 2018, ISSN 1672-528X;
- Yuxiang Wang, Development of Machine Dictionary for Natural language Processing, published on China Computer & Communication, 2019 ISSN 1003-9767.

#### **PUBLISHED PATENT**

- Yuxiang Wang, Improved Computer Monitor, Appearance Invention Patent | Apr 2019;
- Yuxiang Wang, Zhengtong Tan, Zipeng Li, Jianzhisheng College Student Part-time Job System V1.0, software copyright | Feb 2019;
- Yuxiang Wang, Student self-management system V1.0, software copyright | Nov 2017.

#### PROJECTS EXPERIENCES

#### Named Entity Recognition on IEEE Xplore scholarly documents | June 2021-August 2021

Specialized in sub-field of CS field papers and designed our own annotation scheme. Pre-trained 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.

# 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 finetuned BERT model with frozen parameters and not frozen parameters methods respectively.

### **Detector of Offensive Language and Hate Speech for Tweet** | Nov 2020

 Preprocessed tweet text using skip-gram based word2vec method, LIWC, and LDA feature extraction combined with SVM, logistics, and neural network models to achieve text multi-classification tasks.

#### Studied on Heat Transfer Model of Multilayer Insulation Clothing | Sep 2019

Won Provincial 2<sup>nd</sup> Prize in China Undergraduate Mathematical Contest in Modeling

- Model mainly determined size of each threshold by establishing partial differential equation models for existing data.
- Used models for a series of predictions and analyses.
- Undertook determination of threshold of partial differential equations model and preparation of some documents.

# LMS Prototype of Student Performance Predication Model | Sep 2018-June 2019

 Applied ability of processing and analyzing big data to analyze students' scores, class times and failure rates, and data mainly came from a platform data that already running in certain universities in Chongqing

#### Influence Model of Bicycle Sharing on the City | Nov 2018

Won Honor Prize in Asia and Pacific Mathematical Contest in Modeling

- Evaluated the development status of shared bicycles in New York City from multiple dimensions such as transportation and economy.
- Used the model to predict trends in future of shared bikes. Predict the status if there is no shared bicycle.
- Took charge of analyzing the impact of shared bicycles on economic development and establishing corresponding models.

#### Jianzhisheng College Student Part-time Job System | June 2018

Won 2<sup>nd</sup> Prize (10/22) in Chongqing Database Programming Competition

- Undertook the development work of the system front and back interaction.
- Made development of some front-end interfaces.

#### Restoration of Motion Blur Pictures | May 2018

Won 1<sup>st</sup> Prize in Mathematical Modeling of SWU

- Explored the restoration of motion blurred images. Detected the fuzzy region and extracted them.
- Restored the images by filtering related methods.
- Responsible for creation and solution of point extension functions and writing related documents.

#### Intelligent Lighting——Automatic Coloring and Restoration System for Old Photos | May 2018

Won 1<sup>st</sup> Prize of Chongqing Province in China National College Student "Innovation, Originality and Entrepreneurship" Challenge

- 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. This system had a certain commercial value.
- Undertook conducting market demand research of the platform and completing the front-end interface implementation.

### University-sponsored Scholarly Exchange to Auckland University | July 2018

- Studied some computer-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. We used three methods, which were linear fitting, logistic
  regression and kernel regression by R language platform to extract key pixel points to achieve handwritten digit recognition, and
  had high prediction accuracy.
- Showed our research results well and won the honor of the excellent team.

### Search Extension Project | Sep 2017-Jan 2018

- Collected the 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.

#### **INTERNSHIP**

Information Analyst | Oracle Chengdu Branch | July 2019

- Studied the processing methods (ADW through sql developer) and data visualization of big data (Oracle DV)
- 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.

Computer Technician | Chengdu Calabar Information Technology Corp., Ltd. | July 2018

• Studied related technologies of natural language processing in the development department.

#### CAMPUS INVOLVEMENT

- **Director** | Students' Association Union of SWU | 2017-2018
- Core Member | Students Union of SWU | 2016-2017
- Core Member | Students' Association Union of SWU | 2016-2017

#### **SKILLS**

- Programming Languages: Java(include Java SE/EE), Matlab, C(3 years+), R(2 years+), C++, Python, C#, PHP, HTML/CSS
- Programming Tools: MyEclipse, MYSQL/SQL Server/SQL developer, Rstudio, Anaconda, OracleVM VirtualBox(linux)
- Others: Flute (sixth grade), Paintings, Basketball, Guitar