# DEMING SHENG

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## EDUCATION

**Bioinformatics and Artificial Intelligence Track, King Abdullah University of Science and Technology, Saudi Arabia**  08.2023 - Now

Major in Bioengineering. Fully Funded PhD Student (KAUST Fellowship).

**Research topics**: Machine Learning, Survival Analysis.

**School of Computer and Artificial Intelligence, Wuhan University of Technology, China**

Master of Engineering. Major in Software Engineering, GPA 92.03% (Rank:1/71).   09.2019 - 06.2022

**Research topics**: Educational Data Mining, Natural Language Processing, Recommendation System.

President of the College's Science and Technology Association.

**School of Computer and Artificial Intelligence, Wuhan University of Technology, China**

Bachelor of Engineering. Major in Software Engineering, GPA 84.34% (Rank:43/275). 09.2015 - 06.2019

## WORKING EXPERIENCES

**Industrial and Commercial Bank of China, China**  07.2022 - 05.2023

**Position**: Financial Technology Assistant Manager.

I was mainly responsible for inclusive finance related business.

**Awards**: Excellent Cadre (4%, Study Secretary of new employees), Excellent New Employee and Best Apprentice Award of ICBC.

## PROJECTS

**Research on Student-Centered MOOC Teaching Resources Dynamic Adaptive Management** (Hubei Province Science and Technology Support Project, **Main Participant, Grant No: 2015BAA072**)  04.2021 - 06.2022

This project aims to organize existing resource systems and design a student-centered dynamic adaptive management algorithm for MOOC resources, which suffices the dynamic and diverse demands of different individuals.

- We collected and collated data from multiple major MOOC platforms, and further analyzed student behaviour trajectories.
- We proposed an intelligent resource scheduling algorithm based on incremental updates to optimize and manage resources collaboratively.
- We designed a feedback mechanism for student satisfaction to optimize resource services.

**Research on the Technical Route of Informatization Construction in Universities in the Next Five to Ten Years** (Fundamental Research Funds for the Central Universities, **Main Participant, Grant No: 2020IVB069**)  06.2020 - 12.2021

This project conbrew update-resetducted a thorough investigation of the existing informatization construction foundation of Chinese universities and proposed a blueprint for the application of intelligent Internet of Things, 5G/IPV6, artificial intelligence, big data, and blockchain technology to improve the infrastructure.

- We used advanced technology to build a sustainable campus informatization foundation, and offer intelligent resource management and big data analysis services for teaching and scientific research.

- We employed a unified ID to break the existing multi-departmental information barriers to achieve information intercommunication and comprehensive integration.

- We utilized blockchain technology to build a complete information security system to ensure information security.

**Internet Fake News Detection** (Independent Innovation Research Fund Project supported by Wuhan University of Technology, **Leader, Grant No: 2020zy170**)          01.2020 - 03.2021
This project utilizes the multi-modal attention mechanism methods to predict whether each piece of news data needs to be true or fake and its probability of true or fake through the existing data in the other seven major fields.

- We designed four sub-models from the three aspects of news text content, social context, and news image content to fully mine news features from text features, comment semantics, image physical frequency domain, and image pixel domain.

- We attempted several fusion technologies and finally leveraged attention mechanism to integrate the four sub-models to obtain better prediction results.

## PUBLICATIONS

**D. Sheng**, J. Yuan, Q. Xie and L. Li. ACMF: An Attention Collaborative Extended Matrix Factorization Based Model for MOOC Course Service via a Heterogeneous View.(Accepted at **FGCS 2022, JCR Q1, IF=7.307**)

**D. Sheng**, J. Yuan and X. Zhang. Grasping or Forgetting? MAKT: A Dynamic Model via Multi-head Self-Attention for Knowledge Tracing.(Accepted at **SEKE 2021, CORE B, Oral Presentation**)

**D. Sheng**, J. Yuan and X. Zhang. How MOOC Videos Affect Dropout? A Lightweight Pipeline Making Student Dropout Interpretable From Several Levels.(Accepted at **SEKE 2021, CORE B, Oral Presentation**)

**D. Sheng** and J. Yuan. An Efficient Long Chinese Text Sentiment Analysis Method Using BERT-Based Models with BiGRU.(Accepted at **CSCWD 2021, CORE B, Oral Presentation**)

**D. Sheng**, J. Yuan, Q. Xie and P. Luo. MOOCRec: An Attention Meta-path Based Model for Top-K Recommendation in MOOC.(Accepted at **KSEM 2020, CORE B, Oral Presentation**)

## HONORS

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| **National First Prize of The 11-th China National College Student Computer Design Competition** | August 2018 |
| **National Second Prize of "Huawei Cup" The 17-th China National Post-Graduate Mathematical Contest in Modeling** | December 2020 |
| **National Scholarship for Postgraduate** | October 2021 |
| **National Encouragement Scholarship** | November 2016 |
| **Outstanding Master's Degree Thesis of Wuhan University of Technology** | May 2022 |
| **Top Ten Outstanding Graduates of Wuhan University of Technology** | June 2022 |

**Outstanding Master Graduate of Wuhan University of Technology** April 2022
**Outstanding Undergraduate Graduate of Wuhan University of Technology** June 2019
**The First Prize Scholarship x3** October 2019 & 2020 & 2021
**Outstanding Cadres of Student Association x2** June 2020 & 2021

## SOCIETY EXPERIENCE

**Reviewer for: Neural Computing and Applications (JCR Q1, IF=5.606)** 2024-2022

**Web Development Intern of Wuhan Zhongke Yunhua Co., Ltd. China** 07.2018-08.2018

**Teaching Assistant of Discrete Mathematics Course** 03.2020-06.2020 & 03.2021-06.2021

**Volunteer for KAUST Commencement 2023** December 2023

## TECHNOLOGICAL SKILL

**Computer Language and Modelling Framework:** Python, MatLab, LaTex, Java, C++ and Keras.

**Language:** Chinese (Native), English (IELTS: Overall 7.0, Reading 8.5).