Weidong Wu

Email: weidongwu404@gmail.com
Mobile: +86 17746969795
Location: Zhengzhou, China

Summary

I am a responsible, passionate, and self-motivated student seeking admission to a PhD programme. My primary research interests revolve around **Computational Biology** and **Deep Learning for Life Science**. I excel in coding, research plotting, and software development. Furthermore, I possess an **interdisciplinary background** in computing and biomedicine, which enables me to approach problems from multiple perspectives and contribute innovative solutions. With my strong dedication to research and a drive to make meaningful advancements in the field, I am eager to embark on a PhD journey and contribute to the intersection of biomedical engineering, computational biology, and deep learning.

Education

Zhengzhou University (GPA:3.98/4.3) Henan, China
M.S. in Biology and Medicine *Sep 2021 – Present*

Zhengzhou University (GPA:2.8/4) Henan, China
B.S. in Software Engineering *Sep 2017 – Jun 2021*

Projects

De novo design of DNA binding proteins learn from bacterial chromosome segregation system. *2023-Present*

- *M.S. thesis*.
- Mining the public bacteria genome (Sum:84768), and the rules of evolution.
- Designing beyond natural proteins with specificity to binding DNA sequence and regulate diseases caused by chromatin.

ATAC-seq and RNA-seq analysis in primary human Gastric Intestinal Metaplasia. *2022*

- *Responsible for bioinformatics analysis*.
- I discover potential genes such as NKX6-3, HNF4A-AS1 of epigenetic changes leading to gastric metaplasia.
- In addition, the β-catenin(the Wnt signaling pathway in which NKX6-3), CDX2 and AP-1 binding complex, enhances ALPP transcription, which in turn affects *Intestinal Metaplasia*. This hypothesis is currently in the validation phase and will be published.

Dynamic credit assessment system for enterprises in Henan Province based on big data. *2019*

- *Project Leader of student*.
- Combined with the polarity analysis of enterprise news by BERT, a credit evaluation model is established and a web platform integrating query, display and credit evaluation is designed based on Java development.

Publication

PeerJ 2023
Si, Y[$]., **Wu, W**[$]. etc. The evolution of SARS-CoV-2 and the COVID-19 pandemic. (Co-first author).

CACRE 2020
Wu, W., Y. Wang, S. Xu and K. Yan. SFNN: Semantic Features Fusion Neural Network for Multimodal Sentiment Analysis.

ICAIS 2019
Ye, S., Li, C., Zhao, R., **Wu, W**. NOAA-LSTM: A New Method of Dialect Identification. In International Conference on Artificial Intelligence and Security.

Experience

Zhengzhou Digital Technology Co., Ltd *Mar 2021 – Otc 2021*

- *Backend development engineer intern*.
- Solo development backend for reporting *Nucleic Acid Tes*t data in hospitals; participated in the construction of the '*731 Zhengzhou Nucleic Acid Test*' data platform, with a data volume of 50 million**.**

Computer Club of Zhengzhou University *Sep 2018 – Jun 2019*

- *President*.
- Served as president of the association organized many computer clinics and knowledge seminars.

Certifications

- Second place in the multimodal emotion recognition track of the 'KDDI' AI algorithm competition (Rank:2/456).
- China University Computer Challenge "Network Technology Challenge", Second Prize in Central China Region.
- ACM Programming Competition, Zhengzhou University, First Prize.
- "Challenge Cup" National Competition of Extracurricular Academic Science and Technology Works for University Students-First Prize in Henan Province.
- Zhengzhou University SmartTrack Challenge, Second Prize.
- Zhengzhou University Youth APP Design, Second Prize.
- Li, C., Li, H., Wang, Y., **Wu, W**., et al. Multimodal driver emotion-assisted regulation method, CN202010157896.
- **Wu, W.**, et al. Speech Recognition System, Software copyright, 2019SR1187334
- "Coretronic Cup" Future Car Human-Machine Interaction Design Competition, 7th (Top 0.1%).
- Zhengzhou University Postgraduate, First Class Academic Scholarship.

Skills

Languages	:	Python, Java, R.
Frameworks	:	Pytorch, Flask, Spring Boot.
Libraries	:	Sklearn, Pandas, BioPython, Matplotlib.
Others	:	Linux, ATAC-seq, RNA-seq, Sql.