

# YIKUN HAN

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Yikun Han

YikunHan42

## Education

### Sichuan University

09 2019 – 06 2023

Major in Information Resource Management - Overall GPA 3.81/4.0 - Major GPA 3.95/4.0

## Relevant Courses

- |   |   |  |  |
|---|---|--|--|
| • Data Structure and Algorithm              | • Principle and Application of Database | • Information Analysis                       | • The Foundation Programming of C            |
| • Analysis and Design of Information System | • Computer Network and Application      | • Web Programming Technology and Development | • Operation Research and Optimization Method |

## Publications

Detection of Metastatic Cancer on Lymph Node Sections with Deep Convolutional Neural Network | Pytorch

- MLBDDBI 2021, co-first author, accepted by an EI conference proceeding.

Modelling and Publishing the Chinese Information Retrieval Lexicon with VocBench | SKOS

- DCMi 2021, first author, accepted by the conference proceeding.

Ontolex-based Knowledge Base for Information Retrieval | Ontolex

- submitted to an CSSCI journal, second author.

## Project Experience

**Research: Aasen's algorithm for solving symmetric matrix functions**

05 2022 – 11 2022

- Aimed to optimize LAPACK function based on Kunpeng processor to provide high performance version.

**Research: Knowledge Base and Publication of Retrieval Language Terms**

10 2021 – 01 2022

- Aimed to develop a Chinese knowledge base for information retrieval to integrate into the Linked Open Data Cloud and further improve the theoretical system with Chinese elements and visions.
- Semantically processed lexical entries following the principles coined by Tim Burners-Lee, gave metadata encoding proposals for different cases, and deployed a mirror website of VocBench by using Java and Xshell.

**Research: Semantically Modelling and Publishing Lexicon with VocBench**

3 2021 – 10 2021

- Modeled the lexicon using the Simple Knowledge Organization System and published it with a web platform that enables SPARQL semantic search possible by transforming tabular data into RDF metadata.
- Participated in the DCMi Virtual 2021 Student Forum and shared the research about Linked Data and Semantic Web in progress. (Only postgraduate students are invited in principle)

**Research: Data Science and Big Data Analytics**

02 2021 – 06 2021

- Studied machine learning models, graph databases, statistical analysis, and implemented text translation and topic modeling respectively with LSTM and LDA.
- Classified images of tissues in histopathologic scans of lymph node sections using CNN in identifying metastatic ones and determining whether a patient has cancer or not.

**Course: Analysis and Design of Information System**

09 2021 – 01 2022

- Implemented reader and bookshelf modules, and introduced a text-to-speech synthesis function by accessing the API of iFLYTEK for the front-end ebook reading system.
- Implemented ebook upload and list modules, and introduced the parsing function for the nested directory by improving the source code of epub library on GitHub for the back-end management system.
- Connected the front-end and back-end system and provided multilingual support.

**Course: Information Analysis**

06 2021 – 07 2021

- Acquired data from China National Intellectual Property Administration, and completed data cleaning, data pre-processing, statistical inference.
- Adopted linear regression and random forest classification method respectively to analyze the correlation between the frequency of various types of citations on protection duration and validity.
- Conducted data visualization with Matplotlib and Seaborn and drew a relatively reasonable conclusion.

## Professional Skills

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**Programming Language:** Python, R, C, Java, Javascript, JavaScript, SQL

**Computer Tools:** MongoDB, Navicat, Postman, Xshell, Access, Latex, Axure RP

**Linguistics:** TOEFL 101, GRE 324 + 3.5

## Competitions & Awards

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MCM/ICM 

01 2022 – 02 2022

- Responsible for the major part of **modelling and coding**.
- Invested in the effect of tree age on carbon sequestration using a logistic growth model.
- Estimated the ecological value by calculating double integrals in polar coordinates.

**Honorable Mention, Mathematical and Interdisciplinary Contest in Modelling, 2022**

**Provincial Outstanding Prize, College Students' Innovative Entrepreneurial Training Plan Program**

**Second Prize, China College Students' 'Internet+' Innovation and Entrepreneurship Competition**

**Outstanding Student of Sichuan University, 2020-2021**

**Sichuan University Third Prize Scholarship, 2020-2021**

**Sichuan University Third Prize Scholarship, 2019-2020**