

# Shiyi He

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## EDUCATION

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### University of Utah

**Ph.D.** in Computing (09/2023 – Present)

### University of Wisconsin-Madison

**M.S.** in Information (2023)

### East China Normal University

**B.S.** in Information Management and System (2021)

## RELEVANT COURSES

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Advanced Database Systems, Data Mining, Text Mining, Database Design and Application, Foundation of Programming, Business Data Analytics, Information Retrieval, Information Processing and Organization, Web Design and Application, Econometrics, Probability Theory and Mathematical Statistics, Macroeconomics, Microeconomics

## SKILLS

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Python, Java, C#, C++, MySQL, HTML, Matlab, SPSS, Tableau, Weka

## ACADEMIC PROJECTS

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**Project: Predict knowledge transfer of defense research into patents: Research Assistant** 06/2022-Present  
*Supervised by Prof.Hutchins, University of Wisconsin-Madison*

- Used machine learning models to cluster and Identify different categories to classify research papers, and then used the triangle of innovation to track the knowledge transfer of research into patents
- Calculated the normalized coordinates values in given dimensions of scientific papers, as well as the average normalized values of their related papers
- Compared different models' performances in predicting the knowledge transfer process, and tweaked categories to improve models' performance. Responsible for time series analysis and correlation analysis of predicting values

**Project: Research on the interaction between searching and writing: Research Assistant** 09/2021-05/2022  
*Supervised by Prof.Jiang, University of Wisconsin-Madison*

- Designed and implemented a user study to collect data on people's information-seeking and text-reusing behaviors in a writing scenario with tasks for different cognitive levels
- Responsible for cleaning, annotating, and analyzing experimental data. Used text-mining methods to compare the effects of different types of writing tasks on people's information-seeking and text-reusing behaviors, as well as how the two interact

**Project: Research on real estate economic policy: Research Assistant** 07/2020-07/2021  
*Supervised by Prof.Zhang, Shanghai Jiao Tong University*

- Crawled for more than 200,000 pieces of data on Alibaba Real Estate and AutoNavi Maps, and conducted data cleaning in Python
- Transferred the data into a format that can be read by SPSS. Implemented descriptive analysis with SPSS

**Project: Research on real-time recognition of human acupoints based on deep learning** 11/2019-08/2020

*Supervised by Prof.Du, East China Normal University*

- Designed an imagining recognition model of facial acupoints based on Deep Learning and CNN and trained the model with a large amount of face images data
- Tested the model to achieve the real-time recognition of facial acupoints, and wrote a deliverable report

**Project: Study the mutual benefits or conflicts between drugs based on reviews** 07/2019-01/2020

*Supervised by Prof.Lou, East China Normal University*

- Crawled for drug review data on WebMD and processed the data in Python, including inputting data into excel, removing irrelevant and wrong data, and analyzing the valid data
- Conducted text mining of the processed data and analyzed the inhibition or promotion relationships of the interaction between various drugs

## **PROFESSIONAL EXPERIENCE**

**Business Intelligence Intern, Lexical Intelligence** Rockville, MD 05/2022-08/2022

- Collected data from usaspending.gov to analyze funding trends in the Scientific and Technical industry over the past decade
- Used the bag of word model to identify the most important keywords of contracts that are related to Lexical
- Analyzed changes in funding trends received by competitors and partners of Lexical, such as the funding trends of top funders and the top NAICS codes
- Reviewed the company's industry and competitive environment, helping the company determine its direction and understand its partners and competitors

**Data Scientist Intern, Cloud Kitchens** Shanghai, China 07/2020-10/2020

- Collected data through questionnaires and interviews, to investigate the compositions of the current takeaway businesses, including their agency operations, cost structures, and POS usages, and later analyzed the problems of the company
- Accomplished data analysis reports after performing data process and analysis in Excel and Python

**Data Analytics Intern, Ermenegildo Zegna** Shanghai, China 01/2019-03/2019

- Be responsible for managing the internal database of the company and ensuring the regular update and maintenance of database information through large-scale searches on the internet
- Analyzed sales data in Excel with the functions of data visualization and trend charts, supporting managers to make reports and evaluate the sales trends of Zegna and rival brands in the previous years

## **EXTRACURRICULAR ACTIVITY**

**Minister of Liaison Department.** 05/2017-05/2018

*New Media Center of Student Union, ECNU*

- Managed the daily operation of the Student Union's Wechat and Weibo official account, responsible for supervising the post contents of the official account

**Officer of Creative Design Department** 09/2016-06/2017

*Moral Education Development Center of Student Union, School of Economics and Management, ECNU*

- Participated as a designer: logos, gifts, clothing, posters, etc., and as the leader in organizing welcome events for new students, including clothing-purchase, venue layout of the Welcome Party
- Organized "Entering Enterprises" activities, including writing external communications, coordinating with local companies