

# Wenmo Sun

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## EDUCATION

### The University of Arizona

M.S., Information Science

Ph.D., Chemistry

### Jilin University

B.E.

Tucson, AZ

Expected December 2021

May 2021

Changchun, China

July 2014

## TECHNICAL SKILLS

Programming: **Python, Java, SQL, R, HTML, CSS, JavaScript.**

Platforms/applications: **TensorFlow, PyTorch, Hadoop, PostgreSQL, AWS, GCP, Jupyter Notebook.**

Selected Courses: Neural Networks, Text Retrieval and Web Search, Statistical Natural Language Processing, Data Mining with R, Introduction to Machine Learning, Data Structures and Algorithms.

## WORK EXPERIENCE

### Student Researcher, The University of Arizona, Tucson, AZ

Fall 2021- Current

- Developing Named-entity Recognition (NER) models (NLP) for medication identification and indexing in PubMed articles and social media posts for complex knowledge extraction tasks.

### Data Science Intern, Genentech, South San Francisco, CA

May 2021 – August 2021

- Acquired, cleaned, and integrated 200 GB of data from public APIs and internal domains to build a web application software for company-wide safe information retrieval.
- Scraped over 600,000 records from FDA substance registration system using BeautifulSoup.
- Ingested and computed 1 TB data on Amazon Elastic Compute Cloud (AWS).
- Constructed a comprehensive end-to-end data retrieving pipeline for machine learning guided product development and safety assessment.

### Research Intern, Facebook, Redmond, WA

January 2020 – July 2020

- Delivered reliable prediction results through applying machine learning algorithms to refractive index data.
- Generated a patent of AR prototypes in collaboration with cross-functional AR/VR teams.

### Graduate Assistant, The University of Arizona, Tucson, AZ

September 2014 – December 2019

- Generated intellectual property in the form of 4 patents.
- Managed routine maintenance, sample service and user training at the NMR facility.
- Instructed undergraduate and graduate courses.

## PROJECTS

### SmartBrain Web App.

- Developed the AI powered web application software using Bootstrap, HTML, CSS, React JS.
- Implemented an image recognition API for human face detection in the given images uploaded by users.
- Administrated user data with PostgreSQL to ensure accurate, appropriate, and effective use of information.

### An E-Commerce Recommendation System.

- Built a recommendation system using BigQuery ML to generate product recommendations from customer data.
- Obtained predictions from the deployed model and exported them for use in making recommendations.

### Question Answering System, Watson.

- Built a version of IBM Watson question answering system using the data parsed from over 25,000 Wikipedia pages.

### Time Expression Extraction/Sentiment Analysis Using Neural Networks/Machine Learning.

- Built neural networks/convolutional neural networks (TensorFlow, Keras) with 10,000 YouTube comments for spam sentiment analysis and achieved accuracy at 84% (RNN) and 83% (CNN).
- Constructed feedforward neural networks and convolutional neural networks to improve the F1 score of the time expressions extraction in newsletters and clinical text from 0.45 to 0.65 which was among the 10% systems in the class.