# **Shan Chen**

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#### **EDUCATION**

Brandeis University, Waltham, Massachusetts

Master of Science, Computational Linguistics (STEM Designated, NLP/Data Science/Linguistics)

**Expected: May 2022** uistics) **3.84/4.0** 

St. Olaf College, Northfield, Minnesota

Sep 2016 - May 2020

Bachelor of Arts, Cum Laude with distinctions, Mathematics and Japanese Majors.

3.7/4.0

- Honors/Awards: Japanese National Honor Society, Pi Mu Epsilon, JASSO Scholarship, National Japanese Exam Silver Prize, Henry Luce Research Grant Recipient
- Semester abroad: Nagova University School of Engineering, Nagova, Japan

#### **RELEVANT COURSES**

Algorithms & Data Structures, Applied Algorithms, Graph Theory, Graph Mining, Neural Computation, Natural Language Annotation for Machine Learning, Object-Oriented Software Design, Information Retrieval, Statistical Machine Learning & NLP, Natural Language Processing, NLP System, Syntactic Theory, Semantics

#### LANGUAGES AND FRAMEWORKS

Python, PyTorch, Pandas, C++, Linux, R Studio, Java, Flask, Git, Docker, E2, SQL, variety of NLP packages Chinese (Native), English (Native), Japanese (Professional working proficiency)

### WORK EXPERIENCE

NLP Intern, Boston Children's Hospital & Harvard Medical School, Longwood, MA

Jun 2021 - Present

- Clinical NLP adaptation and pipeline developments, training over 500 millions EHR data with HPC
- Build system predicting ICU length of stay based on hourly updated EHR and medical device data, with the goal to alleviate future ICU operation pressure
- Published with a postdoc on a BioCreative VII track3 Workshop, developed a drug name NER system for automatic extraction of medication names in tweets challenge

## Graduate Research Assistant, Brandeis Xue Lab, Waltham, MA

May 2021 - Present

- Developed systematic way to built millions level Chinese COVID news corpus
- Adapt Chinese news documents temporal & event relations extraction models within the BBN system

## Data Engineering Intern, Elphi, Cambridge, MA

Dec 2020 - Feb 2021

• Integrated XGBoost model using GCP Pipeline for predicting mortgage closures into Elphi's loan origination platform, to help users make more informed decisions on loan approvals.

Software Developer, <u>Unismart・ユニスマ</u>, Tokyo, Japan

Jun 2020 - Sep 2020

- Developed a cross-platform app using Flutter and Firebase framework to connect 10k+ Waseda University students during the COVID-19 pandemic with an international team
- Supported real-time push notification, and course calendar system with Firebase API

## Linguistics Research Assistant, St. Olaf College, Northfield, MN

Jun 2018 - Jul 2019

- Conducted data analysis and synthesized data into a published paper (publication listed below) The Paper was published as a linguistics book chapter in 2019 by Lexington Press as: "The Development of Willingness to Communicate in L2 Chinese Writing"
- Generated and analyzed Japanese web-sourced linguistics data for Ito, Ph.D.'s linguistics research

#### SELECTED PROJECTS

## **Washington Post Information Retrieval System**

Apr 2021 - Jun 2021

- Web app retrieving information from Washington post corpus with boolean and vector space search
- Fine-tuned FastText and BERT embeddings, adding spell checks and query expansion to improve TREC retrieving results by 20% using NDCG metrics
- Leveraged frameworks: Flask + Python + Huggingface for front & backend implantations