Junnan Chen

(226) 978-2395

j486chen@uwaterloo.ca

EDUCATION &	**University of Waterloo**	Sept 2015 - Present
PROFESSIONAL	Master in Compute Science, thesis-based, advised by Ming Li	
EXPERIENCES	Research Assistant in NLP Lab. Teaching Assistant for CS135, CS370.	

University Of Waterloo   Sept 2014 - Apr 2015

Undergraduate Exchange Program, School of Computer Science.

Tsinghua University   Sept 2011 - Jul 2015

Bachelor of Engineering, Computer Science and Technology.

Double major in Digital Design, School of Art.

SKILLS

Programming Languages: Java, Python, C++, JavaScript, HTML, CSS, SQL.

Technical Tools: TensorFlow, Keras, Experience with Maven.

RESEARCH EXPERIENCES

Reference Understanding in Dialogs with Contexts

Supervisor: Ming Li   *Apr 2017 – June 2017*

- Achieved an average **accuracy of 93.26%, recall rate of 91.83%**.
- Proposed hierarchical neural models, 1) word-level 2) phrase-level 3) sentence-level.
- Combined Convolution networks (CNN), Long Short Term Memory networks (LSTM), bidirectional LSTM networks (BI-LSTM) and LSTM-encoder-decoder.
- Collected and structurized raw data from the internet.
- First presented a **novel dataset** that contains 400,000,000 labeled data points.
- Model completed with **TensorFlow** and **Java 8**.

Knowledge Base Free Chinese Named Entity Recognition in Short Query

Project Cooperated with RSVP Technologies Inc.   *Oct 2016 – Jan 2017*

- Word-level accuracy of **80%**. Classification **accuracy is 89%**.
- Detection of named entities in a given short query and the classification of the named entity into a predefined-precise class.
- Built DNN model with Embedding and CNN, LSTM-encoder-decoder.
- Addressed the problem of lacking training data by implementing a novel**knowledge-base free** method.

University of Waterloo Online Routing System

CS889 HCI Course Project   *Oct 2015 – Dec 2015*

- Online Routing System provides in-building routes based on personal preferences across building groups.
- Mapping physical features of routes with human feelings (e.g. hurry, tired).
- Developed front end and back end with JavaScript, Html5 and Python individually.

Chinese Story Extraction from Large Document

Graduation Thesis, Supervisor: Ming Li   *Feb 2015 – Apr 2015*

- Proposed Sentence Rank algorithm to determine the start / end sentences of Chinese stories in large document.
- Designed and implemented a Chinese Story Extraction method based on BM25, PageRank, and Sentence Rank algorithms.
- Given a query, it can extract the related story correctly and efficiently from the large document.

WORK EXPERIENCES

Deep Learning Modeling and Back-end Service Maintaining
RSVP Technologies Inc., Software Developer   *Sep 2016 - Present*

- Design and implement various Deep Neural Network models in **TensorFlow** for different requirement.
- Build context understanding service. Improved the speed of service to **20 ms/input** from **45 ms/input**.
- Build and maintain back-end services and APIs for co-workers.

Future Price Trend Prediction based on Deep Neural Networks
Research Project Cooperated with Quantum Cube Corporation   *Apr 2016 – Sept 2016*

- Developed deep-learning algorithms in application to commodity future trading.
- Developed novel data labeling method which detects multi-scale trends and waves.
- Built neural networks combined multi-timescale LSTM layers and CNN layers to predict future trends.

Mobile Picture and Audio generator on Wechat Platform
Tencent Inc, Shenzhen. Software Developer   *Jul 2014 – Aug 2014*

- Established a real-time audio segmentation splicing process on Wechat platform.
- Established a picture hotspot display front end on Wechat platform.
- Designed and implement a Wechat Serve Chanel.

AWARDS

Provost Master's Entrance Award for Women   **Year 2015**
Award for outstanding full-time female students.

Jimin Liu Scholarship   **Year 2014**
Scholarship for exchange students from Tsinghua University to University of Waterloo