

# XINYU LIU

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## SUMMARY OF QUALIFICATIONS

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- Recent graduate with a Computer Science degree at the University of Ottawa.
- Focused on Natural Language Generation with deep language models.
- Experienced in data analysis on Twitter and classification task of predicting chronic disease risk.
- Enjoyed in collaborative work and self-motivated to learn new technologies.
- Fluent in English and Mandarin.

## SKILLS

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- Languages: Python, PHP, C, JAVA
- Tool: GIT, Numpy, Pytorch, Tensorflow,, Latex
- Database: MySQL, Oracle, MongoDB
- Web: Bootstrap, JQuery, Laravel, Slim, NGINX

## EDUCATION

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**University of Ottawa**, Ottawa, Ontario 2015 – June.2017

*MSC* in Computer Science CGPA:8.5/10

- Relevant Courses:Graphic Model,Auto-Verification and Validation, Data Mining, Artificial Intelligence

**University of Windsor**, Windsor, Ontario 2011 – 2015

*BSC[H]* in Computer Information Systems CGPA:8.3/10

- Dean's Honor Roll, Outstanding Academic Excellence

## EXPERIENCE

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**IMPACT Lab** University of Ottawa Oct. 2016 – Present

*Developer & Research Assistant* Supervisor: Yongyi Mao

- Built a deep generative model for poem (Song Ci) generation.
- Inspired by ideas of Sequence to Sequence model and Auto-Encoding Variational Bayes.
- 20% decrease on cross entropy loss by customizing word embedding with vowel and tune information.
- Implemented in Python Pytorch and TensorFlow Framework.

**Neusoft XiKang Healthcare Technology Co.Ltd.** ShenYang,China May. 2016 – Sept. 2016

*Summer Intern*

- Collaborated with a team to implement a health care diagnosis model for predicting chronic disease risk.
- Pre-processed data with cleaning, anonymization and synonyms clustering.
- Based on a combination of 2 classifiers: Collective Filtering and Gradient Descent Boosting Tree.
- Implemented in Python, Java , Mahout and Weka library.

**PARADISE Lab** University of Ottawa

Sept. 2015 – Dec. 2015

*Developer*

- Developed a front and back-end web based registration model for NSERC DIVA Research Centre.
- Implemented in PHP, Laravel and Bootstrap framework.

**Leddy Library** University of Windsor

Apr. 2015 – Apr. 2016

*Developer*

- Developed a Library Training Web System including teaching, quiz and certification modules.
- Applied REST API by Slim framework and written in a object oriented approach.
- Implemented in PHP, Slim, Idiorm and Swiftmailer package.

**Data Mining Lab** University of Windsor

July. 2014 – Apr. 2015

*Research Assistant*

- Crawled user data from Twitter in order to compare and analyze trends and differences from 2009 to 2014.
- Focused on trends of suspended account detection using the Jaccard similarity metric.
- Implemented in PHP, Python, Numpy and MongoDB.

## PROJECTS

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**Zhihu Machine Learning Challenge**

Python/Tensorflow

- Zhihu is a popular Chinese QA website community.
- The competition is to find an automatic tagging model based on questions and topics.
- Analyzed and evaluated the performance of CNN and RNN for multi-label classification task.
- Used a EM model to discover the relationship between the ground-truth tag and labelled tag.
- Achieved 28th place over 211 teams.

**Nvidia 900m Series Hackintosh**

Bash/Python

- Wrote a script to fix no internal display for Nvidia 900m series Graphic on Mac OS for non apple laptops.
- Automatically detect the available display ports and inject properties.
- Supported to add brightness control via DSDT patches.

**Visualization of Mobile Search for a Black Hole in an Anonymous Ring**

Html/Javascript

- Collaborated in writing the web based visualization tool.
- Implemented based on the paper 'Mobile Search for A Black Hole in an Anonymous Ring'.
- Built evaluation functions so that end user can easily compare and analyze each algorithm's complexity.

**Personal Website**

Markdown/Hexo

- Designed and implemented personal website using Hexo.
- Wrote blog in Markdown and Mathjax.
- Published Documentations using Sphinx.
- Used the Google Analytics Embed API for traffic statistics.