

# YIYUAN (Bill) LI

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## **EDUCATION**

Nanjing University, (Jiangsu, China)	September, 2014 –Present
B.S. Electronic Information Science and Technology	2014 to Present, 4.43/5
University of California, Berkeley (California, USA)	January – June, 2017
Department of Electrical Engineering and Computer Science	Exchange Student, 4.0/4.0
Peking University, (Beijing, China)	July, 2016
College of Engineering	Exchange Student, 3.94/4.0

## **RELEVANT COURSES**

Statistical Machine Learning, Probabilistic Graphical Models, Artificial Intelligence, Natural Language Processing, Optimization, Matrix Analysis, Algorithm, Operating Systems, Database, Parallel Processing, Man-machine Interface.

## **RESEARCH INTERESTS**

Natural Language Processing, Machine Learning, Robotics

## **RESEARCH AND PROFESSIONAL PROJECT EXPERIENCE**

**Research Assistant** October, 2016 – Present

*Nanjing University*  
*Natural Language Processing Group*  
*Department of Computer Science and Technology*  
*Supervisor: Professor Xinyu Dai*

- Text summarization of scientific papers via hierarchical RNN architecture and long sequence abstract generation.
- Utilized punctuation in the review data to strengthen sentiment potential of sentences and achieved feature importance improvement of opinion words with not top frequencies in Random Forest.

**Research Assistant** January – August, 2017

*University of California, Berkeley*  
*Berkeley Artificial Intelligence Research Laboratory(BAIR)*  
*Department of Electrical Engineering and Computer Sciences*  
*Supervisor: Professor Laurent El Ghaoui*

- Hierarchical latent topic extraction and customized topic recommendation of restaurant reviews; Word2Vec visualization of topic distribution of different restaurants.
- Robust adaption of Neural Network (ANN) by adding cross-layer restriction and applied ResidualNet block to improve robustness.

**Research Assistant** September – December, 2017

*Tsinghua University*  
*Institute of Image and Graphics Institute of Network and Human Machine Speech*  
*Department of Electronic Engineering*  
*Supervisor: Professor Yongfeng Huang*

- Extracted hierarchical fine-grained aspects structure by propagation clustering method and identified abnormal aspects by adapted mutual information and modified the structure.

**Project – Skyinput (Pinyin Input)** October – November, 2016

*Nanjing University*  
*Project supervisor: Professor Xinyu Dai*

- Implemented Hidden Markov model(HMM) and Viterbi Algorithm to predict the Chinese character or vocabulary word based on the previous pinyin input of the user; designed a user interface(UI) to provide customized interactive

experience in text input.

- Achieved providing both long vocabulary and infrequently used vocabulary to the user.

### **Project – Detachable Robot**

July, 2017

*Peking University*

*Project supervisor: Professor Hongbin Liu*

- Designed a detachable robot that can be used in climbing and search in complicated environments.
- Mentored the structure design of teammates', applied fluid mechanics and structure mechanics in stability analysis.
- Processed motion planning by A\* algorithm.
- Achieved stable movement in aquatic environment and automatic resemble mechanism.

### **Project – Yelp Data Challenge**

March – June, 2017

*University of California, Berkeley*

*Project supervisor: Professor Noureddine El Karoui*

- Analyzed restaurant reviews in Yelp using text processing techniques and latent semantic indexing.
- Design a pipeline model for the team and implement the Support Vector Machine(SVM) part, utilizing punctuation to assist bag-of-words model to acquire a high predictability of stars (0.38 Root Mean Square Error) in classification.
- Provided case study in explaining geographical features' impact to restaurant judgment and demonstrating our model via analyzing distribution mode of restaurants' locations and area average stars in Las Vegas.

### **HONORS & AWARDS**

People's Scholarship	December, 2017
Jingxiao Scholarship (3% award rate)	December, 2017
Honorable Mention in Mathematical Contest in Modeling	February, 2017
People's Scholarship	December, 2017
Merit Student Award (5% award rate)	December, 2015
People's Scholarship	December, 2015
Merit Award in Summer Non-Profit Program	October, 2015

### **LEADERSHIP & VOLUNTEER SERVICES**

Co-Manager of Machine Learning Blog on Github, focusing on Natural Language Processing    June, 2017 – Present

- Contributed framework and learning track for people interested in Natural Language Processing(NLP).
- Recommended up-to-date papers for discussion.

Student Psychological Advisor

September, 2016 – Present

- Set up an anonymous platform to let students seek for advice.
- Led weekly discussion of the advisor group in department

Co-Founder of *Life of Soccer*, public comment column in the Read Daily Online (Zhihu)

October, 2015 – Present

- Written brief and attracting comments to recommended the selected articles.
- Achieved subscription group of 10,000.

Academic Outreach Representative, Student Union

October, 2014 – January, 2016

- Invited faculties or alumni to give talk about study and research.
- Organized outreach activities for students in the department.

Co-Leader of Non-Profit Teaching Program in Liumutang Town, Loudi, Hunan Province

June – July, 2015

- Designed coursework assignment of the team, ranging from algebra, Chinese to magic.
- Led the team to write timely report to local media, raising the awareness of education among local residents.
- Conducted survey in urban and rural areas, identified factors of unbalanced distribution of educational resources.

### **MISCELLANEOUS**

**Languages:** Mandarin, English, Cantonese and French

**Sports:** Soccer, Swimming, Badminton, Chinese Martial Arts (Level 3 Certification)

**Literature:** Enjoy French literature (Hugo, Verne, Dumas)

**Hardware/Software:** C/C++, Java, Python, Matlab, R, SQL, HTML, Markdown, LaTeX, Tensorflow, Pytorch, Linux, NI Multisim

## **SHORT BIO**



I am pretty interested in languages, Classical languages to be particular and language technologies. I would like to develop intelligent system for complicated tasks. My other interests including history (see me with script of *Odýsseia* in the picture!) and classical music (Mozart, Wagner, Vivaldi are my favorite).

I love sharing ideas, opinions and feelings with people. I like to start conversation with people I meet. I'm always willing to share the joy and pain of others and help them, I am happy to become the chief Student Psychological Advisor.

I hold certification in Chinese Martial Art, and also like swimming and soccer. I have been a fan of A.C. Milan (Lega Serie A, Italy) since 2006, it is a team with family atmosphere. It inspired me when I am down and I write some of their stories in the column.

More importantly, I really appreciate all the love and support from my parents in my life, which shapes who I am. I LOVE MY MOM AND DAD!

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