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Education

2013 – 2017	**The University of Nottingham Ningbo, China**. BSc Hons Computer Science
Average mark	85 (British education system, 1%, GPA: 4.0)

Honors and Awards

08/2016   **Best project in seals competiton**, *Alibaba Group*.
For the best project out of 12 projects

05/2016   **Best group project and group leader**, *The University of Nottingham Ningbo China*.
For the best year 3 group project in Computer Science department and the best group leader

03/2016   **UI design competition**, *The University of Nottingham Ningbo China*.
Second award, 1%, Demo link

03/2016   **Outstanding student**, *The University of Nottingham Ningbo China*.
For innovative and excellent academic contribution, 1%

12/2015   **Provost's Scholarship**, *The University of Nottingham*.
For excellent academic performance, 15000RMB, 1.5%

12/2015   **2015 Ningbo Collegiate Programming Contest**, *The Education Committee of Ningbo*.
First award

05/2015   **Outstanding Director of Organization**, *The University of Nottingham Ningbo China*.
For outstanding leadership in social activities, 1%

12/2014   **Dean's Scholarship**, *The University of Nottingham*.
For good academic performance, 6000RMB, 10%

Papers

09/2016   **Learning to detect redundancies with word mover's distance based on distributed representations**, *Association for the Advancement of Artificial Intelligence (AAAI)*.
Applying

11/2016   **Reflections from Student-staff Collaboration to Develop an Open Educational Resource**, *Teaching, Assessment and Learning for Engineering (TALE)*.
Applying

Internship

05/2016 – 09/2016   **Taobao Team**, Alibaba Group, Algorithm Engineer.
- Automatic mobile-based speaker verification system development
  - Realize and compare several state-of-art approaches and models, such as GMM-UBM, I-vector and JFA to realize speaker verification tasks in practice.
  - Optimize and come up with new algorithms to improve the performance.
  - Set up a deep learning based speaker verification system.
- Security Rebot design and development under the funding from GNomeMagic Lab
  - Set up a face detection and verification system.
  - Applying for the national patent.

Technique   *Java/C++/Node.js/MPI environment/Hadoop/Mongo DB*

05/2015 – 09/2015   **Big Data and Visual Analytics Lab Internship**, The University of Nottingham Ningbo China, Reserach assistant.
- Configuring and practicing a big data architecture (Hadoop and MPI) for social media data mining and novelty event detection.
- Collecting health-related data from social media websites (Twitter, Weibo).
- Conducting data pre-processing and cleaning work.
- Conducting data analysis (including keywords, sentiments, numerical analysis) using machine learning technology.
- Computer vision of big data.

Technique   *Java/C++/Node.js/MPI environment/Hadoop/Mongo DB*

Skills

Basic   Image Processing, Computer Vision, HCI, Data Visualization(Gephi), Python, Matlab

Intermediate   Web technique, MEAN stack, Machine Learning, Natural Language Processing, Data Mining, Data analysis, R, Weka, Database Management, C/C++, Java, Design Pattern, Software Engineering, Agile Development

Research

09/2015 – Present   **First Story Detection (FSD) with multiple approaches**, *coresearcher*.
- Based on the statistics language model, applied LSI and incremental TF-IDF to realize real-time FSD.
- Optimized FSD by applying SVD to solve polysemy and synonymy problems and reduce noise.
- Based on the neural network language model, applied the state-of-the-art word embeddings (word2vec) and earth mover's distance (EMD) in FSD.
  - Optimized the process of calculating EMD.
  - Applied EMD in clustering (including K-means, hierarchical clustering and etc.) to realize highly accurate FSD.
- Applying for a paper in top international conferences.

Technique   *Gensim(python)/Word2Vec/neural network/machine learning/statistics modeling*

05/2015 – 09/2015   **Sentiment analysis based on lexicon, supervised and ensemble learning**, Big Data and Visual Analytics Lab.
- Compared the difference in feature selection methods (Information gain, CHI and Document frequency).
- Optimized the lexicon based sentiment analysis:
  - Optimized the algorithm by considering intensifying words, negation words, position and punctuations.
- Compared and optimized the supervised approach using machine learning classification algorithms:
  - Compared the difference in feature weight algorithms (Presence, TF and TF-IDF).
  - Compared the difference in classification by using different supervised algorithms (including Multinomial Naive Bayes, KNN, C4.5, SVM and etc.) under different feature selection methods and feature weight algorithms.
- Classified sentiment using lexicon-based ensemble learning methods:
  - Generated features based on various lexicons.
  - Enhanced classification by using ensemble classifiers (including Boosting, Bagging and etc.).

02/2016 – Present	**Data mining and visual analytics**.
	○ Data visualization using Gephi to explore small-world network.
03/2016 – Present	**Deep learning**, Big Data and Visual Analytics Lab and Nvidia, team leader.
	○ Cooperating with Nvidia Tech. to expand DIGITS (deep learning open source package) for practical application.

Open-source Projects

01/2016 – Present	**QuickNote (a scientific note-taking app)**, *team leader, scrum master, full-stack developer*, http://quicknote.cc.
	○ Product description:
	– Base on MEAN stack and node-webkit technique
	– Monitor and record users' activity data for data analysis and mining to find a scientific way of taking notes
	– Base on machine learning and NLP algorithms to classify notes to build a university ranged but major or topic specific knowledge database
	– Build a user-friendly notes and knowledge sharing environment to facilitate and manage innovation and organisational learning
	– Support a number of distinct features including powerful multimedia, darag and drop, cloud storage and sharing mechanism.
	○ Embraced and promoted the spirit of open-source.
	○ Efficiently led the development team to complete a full cycle of the software engineering process.
	○ Acquired the experience of being a MEAN full-stack developer.
	○ Highly understood the conflict and change management.
	○ Highly developed the understanding in the agile development.
05/2016 – Present	**Yigong She (a voluntary worker platform)**, *team leader, full-stack developer*.
	○ Product description:
	– Base on LAMP stack technique
	– Offer two systems, one is for voluntary workers to register and arrange work and the other is for managers to manage the whole team.
	○ Promoted charity to students in the university.

Portfolio

QucikNote, *http://panatopos.com/QucikNote*.
- ○ A corss-platform scientific note-taking application
- ○ Open-sourced project, under

Super Delivery (UI design), *http://panatopos.com/SuperDelivery*.
- ○ Won the first award in the university UI competition and highest mark in the HCI module.
- ○ Developed deeper understanding in HCI, UI design and software engineering process.

Interactive games developed with Python, *https://github.com/PAN001/Interactive-Game-using-Python*.
- ○ Integrate the learning process into designing Python-based games.

Scores

GRE	326 (Verbal: 159, Quantitative: 167)
TOEFL	100 (Reading: 29, Listenning: 26, Speaking: 20, Writing: 25)

Selected Courses at university

AE1DBS	**Database Systems**, first class.
	○ In-depth knowledge of the relational models of database systems.
	○ Be able to considerable and effective use MySQL and MongoDB for practical usage.

AE1WPS **Web Programming and Scripting**, first class.
- In-depth knowledge of the network protocols, layers and models.
- Adept at designing static and dynamic websites and complete web applications using MEAN stack.
- Skilled in using scripts to conduct web crawler and information retrieval.

AE2ADS **Algorithms and Data Structures**, first class.
- In-depth knowledge of common data structures and algorithms.
- Adept at applying knowledge into practical usage.

AE2SAD **Software Application Development**, first class.
- In-depth knowledge of modern interface paradigms and design patterns.
- Adept at designing and writing object-oriented programs and GUIs.

AE2SEM **Software Engineering Methodologies**, first class.
- In-depth knowledge of modern software development strategy, change and conflict management.
- Skilled in agile development and productive teamwork.
- Skilled in software testing and quality assurance.

Selected Completed online Courses

Johns Hopkins	**Exploratory Data Analysis**	*Verified certification URL*
Duke	**Data Analysis and Statistical Inference**	*Verified certification URL*
Stanford	**Mining Massive Datasets**	*Certification URL*
Stanford	**Cryptography**	*Certification URL*

Workshop

09/2016 **UNNC Teaching & Learning Conference**, *speaker*, The University of Nottingham Ningbo China.
- Give a presentation on introduction to QuickNote and how it will be integrated into daily teaching and learning at the university.

Organization

05/2014 – 05/2015 **Student Society Center (SSC)**, *The director of the secretariat department*, The University of Nottingham Ningbo China.
- Organize and managed the secretariat department.
- Handled the public relations among the organization.
- Regulated and supervised more than 80 societies and organizations at campus.
- Organized and directed several university level activities, including: UNNC Open Day, Sports Festival, Art Month and etc.
- Taking charge of editing and designing UNNC society books;
- Highly developed the capability of the operation and coordination.

09/2014 – Present **Learning Community Fora (LCF)**, *LCF for Computer Science Department*, The University of Nottingham.
- Liaised with all students and represented as students to raise their issues and requests to the academic faculty.
- Supported the improvement of academic teaching and learning.
- Obtained the ability of communication and negotiation.
- Highly developed the sense of responsibility and integrity.