

# Curriculum Vitae/Resume

Fanzhong Kong  
Computer Science & Engineering M.S.  
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## EDUCATION

<b>University of Michigan, Ann Arbor, MI</b> <i>Bachelor of Computer Science</i>	<b>Sep. 2016 – Present</b> GPA: 4.00/4.00
<b>Shanghai Jiao Tong University, Shanghai, China</b> <i>Bachelor of Computer and Electrical engineering</i>	<b>Sep. 2014 - Present</b> GPA: 3.77/4.00

## RECENT EXPERIENCE

<b>University of Michigan Database Research Group – Python (Main), Java, CoffeeScript</b> <i>Research Assistant, Code Completion System Group under Prof. Michael Cafarella</i> <ul style="list-style-type: none"><li>• Innovated to extract features from codes used to predict unknown part in code</li><li>• Used Java parser and regular expression to extract features from source codes with multi-threads</li><li>• Built an REST API server on Linux remote server and the plug-in in <i>Atom</i> to test the accuracy of the system</li><li>• Used NN to do word representation (as a feature) and trained features with logistic regression</li></ul>	<b>May 2017 – Present</b>
<b>University of Michigan Biomechanics Physiology Lab – C++, github</b> <i>Software Developer, 3DSSPP (an MFC software used by Ford and other research groups) Group</i> <ul style="list-style-type: none"><li>• Worked with a team of 5 to develop functions based on <i>OpenGL</i> in an existing huge frame work</li><li>• Located and corrected the existed bugs, collaborating to improving the code or algorithm with low efficiency</li></ul>	<b>March 2017 – September 2017</b>
<b>University of Michigan Tutor</b> <i>Programming Tutor</i> <ul style="list-style-type: none"><li>• Helped the student with difficulty in debugging or improving her programs by 30% of the score</li><li>• Deepened the student's understanding towards the data structure and algorithm</li></ul>	<b>February 2017 – April 2017</b>

## PROJECTS

### Wiki search engine – Python, HTML, JavaScript, mySQL

- Worked with a group of 3 to collaborate on developing search engine for part of Wikipedia with an interface
- Used distributed computing (MapReduce) to speed up ranking process and save memory (to get tf-idf score)
- Built two servers with one for search engine, one for giving rankings

### Mhacare (website) – HTML, JavaScript, Firebase

- Worked with a group of 4 to build the website base on MVC for doctor to see prescription for certain patient
- Used JavaScript as controller, HTML as view, Firebase(noSQL) as model
- Did data syntax to avoid possible code injection

### Sentiments Classification on Twitter Data – Python

- Extracted feature with bag-of-words, applied SVM and One vs. One method to do the multiclass prediction
- Used different metrics (F1-score, AUROC, ...) via cross validation to determine hyperparameters

### Fakebook Database Management – Java, SQLPlus

- Used JDBC to access database to access and modify data with least data delivery principle
- Drew ER diagram to design the table schema and avoid duplicate data storage

### Assessment on different RL algorithms(MC, Q-learning, Dyna-Q, DNQ) on simple environments - Python

- Implemented algorithms and evaluated their performances(convergence rate, accuracy) to set hyper-parameters

See more about personal projects (java, android, website) in <https://kongfanzhong.github.io/personal-website-kfz/>

## SKILLS

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*Platform:* Windows 7/8/10, Linux

*Languages:* C++, Python, Java, JavaScript, HTML, Matlab, CoffeeScript, SQLPlus, MySQL

*Applications:* Microsoft Office, Adobe Premiere, Photoshop, Lightroom, After Effects, Latex, Prezi

## VOLUNTEERS, ACTIVITIES, LEADERSHIP

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- Volunteers for impoverished Yunnan mountain zone to help teacher teach the local children
  - Teach the courses, mark and correct the homework, and make record video.
- Director - media department in Joint institute

## HONORS, SCHOLARSHIPS

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- Dean's List, 2016, 2017, *University of Michigan*
- University Honors, 2016, 2017, *University of Michigan*
- Excellent Academic Scholarship, second-class, 2015, 2016, *Shanghai Jiao Tong University*
  - Top 10% academic performance
- Distinguished leadership award, 2015, *Joint Institute, Shanghai Jiao Tong University*
  - For top 2% of students in institute
- 3 Good Student, 2015, *Shanghai Jiao Tong University*
- Dean's List 2014, 2015, Joint Institute
- Excellent Summer Social Practice second prize, 2015, *Joint Institute, Shanghai Jiao Tong University*
- Outstanding Freshman Scholarship, 2014, *Joint Institute, Shanghai Jiao Tong University*
- The First Prize for National Olympiad in Informatics in Provinces 2012, 2013, *China Computer Federation*
- Bronze model for Asia-Pacific Informatics Olympiad (China Region), *China Computer Federation*