**Zexi Han**

Gender: Male

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**Education Background**

**Northeastern University,** Boston, MA Jan. 2017-Present

College of Computer and Information Science Expected graduation: Dec. 2018

*Candidate for a Master of Science in Data Science*

Major Courses: Algorithms, Supervised Machine Learning and Learning Theory, Unsupervised Machine Learning and Data Mining

**Beijing University of Posts and Telecommunications,** Beijing, China Sept. 2012-Jun. 2016

Joint Program with Queen Mary University of London GPA: 85.1/100

*Bachelor of Science in Telecommunications Engineering with First Class Honors*

Major Courses: Data Structures, Artificial Intelligence, Software Engineering, Linear Algebra, Probability Theory and Stochastic Process, Principles of Communications

##### Technical Knowledge

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| ●Language | JAVA(major), MATLAB, Python, C |

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| ●System | Windows, Linux, macOS |
| ●Machine Learning | Linear/Logistic Regression, SVM, (Convolutional) Neural Networks, kNN |
| ●Deep Learning Tools | Caffe, Tensorflow, Torch |

##### Research Experience

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| **09/2016-11/2016** | ***Student,* Network Intrusion Feature Representation and Detection with Support Vector Machine,** Boston, NU |
| ●Detected network intrusions with machine learning approach  ●Implemented a network intrusion system with support vector machine and tested its performance on NSL-KDD dataset | |
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| **05/2016-07/2016** | ***Research Intern,* Edge Sensing of Smart Watch,** Beijing, HCI Lab of Tsinghua University |
| ●Discovered a brand new human computer interaction of smart watch – Edge Sensing  ●By tapping from 4/6/8 directions of the edge, smart watch could identify the motion direction with its accelerator and respond with certain interaction in its android wear software  ●Machine learning techniques were used to do the classification of accelerator’s motion data | |
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| **08/2015-06/2016** | ***Research Intern,* Image Feature Representation and Rapid Retrieval with Deep Neural Networks,** National Laboratory of Pattern Recognition at the Institute of Automation of the Chinese Academy of Sciences |

●Proposed a Three-stage Hybrid Image Retrieval Framework (Classification, Object Detection and Matching) to the task of same design product image retrieval with Deep Learning (CNN)

●Experimented on the ALISC 5 million dataset with 10 high level concepts and 676 sub concepts

●Achieved the best mAP of 57.5 % on makeup and good performance on tops, snacks and drinks

**Achievements:**

●**It was elected as the BUPT Outstanding Final Project (12/600+)**

##### Project Experience

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| **02/2016-05/2016** | ***Developer,* Person Active Track with Unmanned Aerial Vehicle,** BUPT |
| ●Made tests and research of the Active Track flying mode of DJI PHANTOM 4  ●Performed experiments on object recognition with deep learning approach  ●Whether you are running, cycling, skiing and more, the unmanned aerial vehicle could use our computer vision based object recognition system to track you as you go. | |
| **10/2015-02/2016** | ***Selected Representative,* Design & Build Winter Hack,** QMUL |

●Attended the interesting and exciting robot tutorials given by the experts from the UK

●Teamed up with selected 10 British and 10 Chinese students to work on D&B Hack NAO Robot competition at EECS Electronics Lab of QMUL

●Sensor control and python based image recognition algorithms were implemented

**Achievements:**

●Our team won the **Winning Team** in the competition

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| 03/2015-04/2015 | *Contestant,* Trial for Design & Build Winter Hack in London, QMUL |

●Designed and implemented four interesting ball games on the same theme but different styles in Java

●Created the interactive sphere game controller with ADXL345 digital accelerometer at the basis of Arduino to control the games

**Achievements:**

●Reached the chance to winter hack in London with the **first placing**

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| 03/2015-06/2015 | *Team Leader,* Parking System Design Project, **BUPT** |

●Designed the layout and structure for the system in light of changes in the requirements

●Co-worked with team members in design, JAVA coding and unit test of software modules

●Adopted best practices of development to realize the initial vision, made the software development report

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| 07/2014-09/2014 | *Team Leader,* Electronic Keyboard Scientific Project, **BUPT** |

●Designed circuits according to the functional objectives

●Got better acquainted with the single chip microcomputer

**Achievements:**

●Scored 97 and won the chance of participating in the trial for Design & Build Winter Hack in London (60/600+)

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| 05/2014-05/2015 | *Team Leader,* Development of MEBO Visualized Microenvironment Monitoring System, **BUPT** |

●Completed the embedded system development and the network connection with multi-sensors

●Realized the visualization design of indoor microenvironment and innovative interaction design

●Received wide acclaim in the innovation exhibition and deputized for the team at innovation conference

**Achievements:**

●Scored A-Level in the check which won our team extra budget

●Won **The Second National Prize** at the innovation exhibition

##### Online Courses

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| --- | --- |
| 10/2016-11/2016 | **Data Science: Data to Insights,** MIT Professional Education & MIT Institute for Data, Systems, and Society (IDSS) |
| 09/2016-11/2016 | **Data Structures and Algorithms,** BITTIGER |
| 07/2016-09/2016 | **Machine Learning,** Coursera & Stanford University |

##### Social & Extracurricular Activities

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| 08/2014 | Volunteered to work for the 13th China Internet Conference |
| 03 /2014-04/2014 | Took the Part-time work at Starbucks |
| 09/2012-07/2013 | Worked as Secretary of the Science and Technology Department, Student Union |

##### Honors & Awards

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| 06/2016 | First Class Honor Degree |
| 06/2016 | **BUPT Outstanding Final Project** |
| 02/2016 | **Winning Team in Design & Build Winter Hack** |
| 05/2015 | **The Second National Prize In Innovation Project** |
| 09/2012-09/2015 | **The Third-Class Scholarship** |

##### INTERESTS

● Karate

● Fine Arts