

# Bo Cao

[b.b.cao@outlook.com](mailto:b.b.cao@outlook.com); (720) 288-9556; Address: Stony Brook, NY  
<http://github.com/bryanbo-cao>; <http://bryanbo-cao.github.io>; [linkedin.com/in/bryanbocao](https://www.linkedin.com/in/bryanbocao)

## EDUCATION

<b>Stony Brook University - SUNY</b> , New York	08/2018-Present
Ph.D. Computer Science	
<b>University of Colorado Boulder</b> , Boulder, Colorado	08/2015-05/2018
M.S. Computer Science <b>GPA: 3.9/4.0</b>	
Honors: Beverly Sears Graduate Student Grant award for Master Dissertation from CU-Boulder	03/2017
<b>The University of Sheffield</b> , Sheffield, United Kingdom	09/2012-09/2013
MSc Software Systems and Internet Technology	
<b>Guangdong University of Technology</b> , GuangZhou, China	09/2007-06/2011
B.Eng. Computer Science and Technology	
Honors: First (top 3%) & Second (top 8%) Class Scholarships	06/2010

## SKILLS

Languages: Python, Java, JavaScript, PHP, SQL, C++  
Machine Learning Models: kNN, Decision Tree, Bagged Tree, Random Forest, k-means Clustering  
AI/ML/CV Tools: OpenCV, Pandas, Scikit-Learn, Matplotlib, NumPy, TensorFlow, GraphLab  
Deep Learning: CNN, RNN, LSTM, Autoencoder  
Big Data: Kafka, Spark, Hadoop, MapReduce, AWS, MySQL  
Web-Dev: JavaScript, MVC, Bootstrap, jQuery

## WORK EXPERIENCES

<b>Research Intern</b> Ericsson Silicon Valley, Santa Clara, California <a href="#">[Research Blog]</a>	05/2017-08/2017
• Developed an app of <b>Collaboration on Augmented Reality</b> using <b>HoloJS, Node.js, WebGL &amp; JavaScript</b>	
<b>Project Research Assistant</b> 02/2016-05/2017 <b>Lab Network Systems Administrator</b> 08/2016-05/2017	
Laboratory for Interactive Robotics & Novel Technologies (IronLab), University of Colorado Boulder	
• Ran user study to collect gestures to navigate robots from <b>RGB-D</b> camera and Myo Armband	
• Designed a <b>Recurrent Convolutional Neural Network</b> to <b>classify</b> gestures to navigate robots on <b>RGB</b> video	
<b>Test Engineer</b> IBM International System Technology Co. Ltd (ISTC), Shenzhen China	05/2014-11/2014
• Tested <b>System X</b> servers by <b>test code</b> run on <b>Linux</b>	
• Implemented <b>Front-end</b> work of <b>Redfish</b> Project for <b>report auto-generation</b> using <b>JavaScript, Python</b> and <b>web.py</b>	

## PROJECTS

<b>Master's Thesis: DiffNet – A Deep Learning Method for Intuitive Robot Navigation</b>	08/2016-04/2017
• Collected data in <b>RGB-D images</b> and <b>videos</b> for robot navigation by <b>KinectV2 &amp; Myo Armband</b> .	
• Implemented <b>Recurrent Convolutional Neural Network &amp; Autoencoder</b> using <b>TensorFlow &amp; Python</b> .	
<b>Art Images Similarity to Human Judgment Accuracy</b> <a href="#">[Github]</a>	08/2017-12/2017
• Designed a novel method to calculate <b>distance</b> between two images using <b>Hough Line Transform</b> in <b>OpenCV</b> .	
• Implemented <b>autoencoder</b> extract <b>image feature</b> from art images using <b>TensorFlow &amp; Python</b> .	
• Increased the correlation between distance of images and human judgement accuracy with <b>Spearman's</b> Correlation.	
<b>Music Box Churn Prediction and Recommendation</b> <a href="#">[Github]</a>	06/2018-07/2018
• Built a system to predict churns based on log data using Bagged Trees, SVM, Grid Search – Random Forest etc.	
• Generated new features of play time, listen threshold, etc., increased the churn prediction from <b>82.95%</b> to <b>97.88%</b> .	
• Recommended songs based on <b>item-similarity</b> , <b>clustered</b> restaurants using <b>Python &amp; GraphLab</b> .	
<b>Restaurant Recommendation System</b>	05/2018-07/2018
• Built a <b>restaurant recommendation</b> system on <b>Yelp Dataset</b> to recommend restaurants based on <b>item-similarity</b> , <b>clustered</b> restaurants using <b>Python &amp; GraphLab</b> .	
<b>Big Data Pipeline for Criminal Data Visualization</b>	02/2016-05/2017
• Built a big data pipeline <b>GreenArrow</b> to gather and visualize criminal data on an interactive map using <b>Java, AWS, JavaScript, MongoDB, Kafka, Bootstrap, Spark, Node.js, Google Maps APIs, JSON, Twitter APIs</b> . <a href="#">[Github]</a>	