

Bo Cao

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EDUCATION

University of Colorado Boulder, Boulder, Colorado Graduated in 05/2018
M.S. Computer Science **GPA: 3.9/4.0**
Honors: Beverly Sears Graduate Student Grant award for Master Dissertation from CU-Boulder 03/2017
The University of Sheffield, Sheffield, United Kingdom 09/2012-09/2013
MSc Software Systems and Internet Technology
Guangdong University of Technology, 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: Java, Python, JavaScript, PHP, SQL, C++
Back-end: MVC, Tomcat
Big Data: Kafka, Spark, Hadoop, MapReduce, AWS
Web-Dev: JavaScript, Node.js, MVC, Bootstrap, jQuery, Socket.io, D3.js, AJAX, JSON
Machine Learning Models: Supervised Learning, CNN, R-CNN, RNN, LSTM, Autoencoder
Database: MySQL, MongoDB
AI Frameworks: TensorFlow
Computer Vision: OpenCV

WORK EXPERIENCES

Research Intern Ericsson Silicon Valley, Santa Clara, California [\[Research Blog\]](#) 05/2017-08/2017
• Developed an app of **Collaboration on Augmented Reality** using **HoloJS, Node.js, WebGL & JavaScript**
Project Research Assistant 02/2016-05/2017 **Lab Network Systems Administrator** 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 **RGB-D** camera and Myo Armband
• Designed a **Recurrent Convolutional Neural Network** to **classify** gestures to navigate robots on **RGB** video
Test Engineer IBM International System Technology Co. Ltd (ISTC), Shenzhen China 05/2014-11/2014
• Tested **System X** servers by **test code** run on **Linux**
• Implemented **Front-end** work of **Redfish** Project for **report auto-generation** using **JavaScript, Python** and **web.py**

PROJECTS

Master's Thesis: DiffNet - Intuitive Robot Navigation from RGB-D camera using Parallel R-CNN 08/2016-Present
• Collected data in **RGB-D images** and **videos** for robot navigation by **KinectV2 & Myo Armband**.
• Designed and implemented **Recurrent Convolutional Neural Network** using **TensorFlow & Python**.
Integration of Robotics Car [\[Github\]](#) [\[YouTube Demo\]](#) 08/2015-12/2015
• Integrated a Robotics Car with Jaguar and Stewart platform, controlled and communicated via ROS (Robots Operating System)
• Built the code to construct environment via SLAM using stereo camera, IMU(Inertial Measurement Unit) and Lidar.
Art Images Similarity to Human Judgment Accuracy [\[Github\]](#) 08/2017-12/2017
• Designed a novel method to calculate **distance** between two images using **Hough Line Transform** in **OpenCV**.
• Implemented **autoencoder** extract **image feature** from art images using **TensorFlow & Python**.
• Increased the correlation between distance of images and human judgement accuracy with **Spearman's** Correlation.
Web Development Boot Camp 02/2016-05/2017
• Built a big data pipeline **GreenArrow** to gather and visualize criminal data on an interactive map using **Java, AWS, JavaScript, MongoDB, Kafka, Bootstrap, Spark, Node.js, Google Maps APIs, JSON, Twitter APIs**. [\[Github\]](#)
• Developed a website **Robot Path Learning** for users to train robot on path learning using **Java, JavaScript, MVC, URL, Design Pattern, Bootstrap, Spring, Hibernate, JSON & MySQL**.
• Developed a **Web Based Holiday System for the Medical School Postgraduate** for online holiday application using **HTML, CSS, JS, Bootstrap, MySQL** on **WAMP(Windows Apache MySQL & PHP)**.