Bo Cao

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EDUCATION

University of Colorado Boulder, Boulder, Colorado — Expected Graduate 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++
Database: MySQL, MongoDB
Back-end: MVC, Tomcat
AI Frameworks: TensorFlow
Big Data: Kafka, Spark, Hadoop, MapReduce, AWS
Computer Vision: OpenCV
Web-Dev: JavaScript, Node.js, MVC, Bootstrap, jQuery, Socket.io, D3.js, AJAX, JSON
Machine Learning Models: Supervised Learning, CNN, R-CNN, RNN, LSTM, Audoencoder

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)**.