Bo Cao

b.b.cao@outlook.com; (720) 288-9556; Address: Santa Clara, CA
http://github.com/bryanbo-cao; http://bryanbo-cao.github.io; linkedin.com/in/bryanbocao

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: Python, Java, JavaScript, PHP, SQL, C++
Machine Learning Models: kNN, Decision Tree, Bagged Tree, Random Forest, k-means Clustering
Deep Learning: CNN, R-CNN, RNN, LSTM, Audoencoder
AI/ML Tools: TensorFlow, GraphLab
Big Data: Kafka, Spark, Hadoop, MapReduce, AWS, MySQL
Computer Vision: OpenCV
Web-Dev: JavaScript, Node.js, MVC, Bootstrap, jQuery, D3.js, AJAX, JSON

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

Data Science Boot Camp — 05/2018-Present
- Built a **music recommendation** system **Music Box Churn** to recommend music based on **item-similarity** using **Python & Spark**.
- Built a **restaurant recommendation** system on **Yelp Dataset** to recommend restaurants based on **item-similarity, clustered** restaurants using **Python & GraphLab**.

Master's Thesis: DiffNet – A Deep Learning Method for Intuitive Robot Navigation — 08/2016-Present
- Collected data in **RGB-D images** and **videos** for robot navigation by **KinectV2** & **Myo Armband.**
- Implemented **Recurrent Convolutional Neural Network & Autoencoder** using **TensorFlow & Python.**

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.

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)
- Navigated the indoor environment via SLAM using stereo camera, IMU(Inertial Measurement Unit) and Lidar.

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 **Web Based Holiday System** using **HTML, CSS, JS, Bootstrap, MySQL** on **WAMP**.