Bo Cao
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EDUCATION

Stony Brook University - SUNY, New York   08/2018-Present
   Ph.D. Computer Science
University of Colorado Boulder, Boulder, Colorado   08/2015-05/2018
   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.S. Computer Science and Technology
   Honors: First Class Scholarships for academic excellence (top 3%)   09/2009-06/2010
               Second Class Scholarships for students' All-round development (top 8%)   09/2009-06/2010

SKILLS

   Languages: Python, Java, JavaScript   Deep Learning: CNN, RNN, Audoencoder
   AI/ML/CV Tools: PyTorch, Keras, OpenCV, Pandas, Scikit-Learn, Matplotlib, NumPy, TensorFlow
   Others: D3, Kafka, MapReduce, AWS, MySQL

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 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 on
         Robot Operating System (ROS)
      ● 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

Weakly Supervised Segmentation using SeedLoss   11/2018-12/2018
   ● Implemented the dataloader for Semantic Boundaries Dataset(SBD) & **combined loss** on VOC and SBD dataset
   using **Python & Pytorch**.
   ● Increased **53.51%** IOU score from **52.31%** on VOC2012 dataset using combined loss.
Master's Thesis: DiffNet – A Deep Learning Method for Intuitive Robot Navigation   08/2016-04/2017
   ● 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.
Music Box Churn Prediction and Recommendation [Github]   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 **82.95%** to **97.88%**.
   ● Recommended songs based on **item-similarity**, **clustered** restaurants using **Python & GraphLab**.
Big Data Pipeline for Criminal Data Visualization   02/2017-05/2017
   ● 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]