

Hengyue Liu

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- EDUCATION** *Master of Science, Electrical Engineering (Multimedia and Creative Technologies)*
University of Southern California, GPA: 3.81/4.0 expected Dec. 2016
Bachelor of Science, Telecommunications Engineering (Multimedia)
Beijing University of Posts and Telecommunications, GPA: 84.6/100 Jun. 2014
- TECHNICAL SKILLS** *Languages & Libraries & Frameworks:*
C/C++, Matlab, Python, Java, Lua, Ruby, HTML, Javascript, L^AT_EX;
OpenCV, Torch, CUDA, dlib, Boost, OpenMP, OpenGL, Python-NLTK, Python-scikit-learn;
Docker, AWS Elastic Beanstalk, AWS S3, Redis.
Software: Photoshop, AutoCAD, 3D Studio Max, After Effects, Unity 5.1.
- EXPERIENCE** *Research & Software Engineer Intern* May 2016 - present
CamFind Inc, Los Angeles
- Implemented a circular object recognition algorithm with accuracy higher than 95% and recall higher than 90%.
 - Implemented a large-scale image retrieval system with parallel Bag of Words matching and inverted file structure.
 - Implemented an image caption evaluation algorithm through CNN text classification - current best test performance 83.3%.
- Research Assistant* May 2013 - May 2014
BUPT, State Key Laboratory of Networking and Switching Technology, Beijing
- Simulated with imported map data of city Koln and real O/D matrices of local vehicles via software SUMO.
 - Implemented pathfinding algorithms for large-scale vehicular network, and analyzed related VANET topological metrics in C++ from over 7 Gigabytes simulation dataset.
- Software Engineer Intern* July 2013 - September 2013
Tsinghua University, Research Institute of Information Technology, Beijing
- Implemented the disease prediction web service interfaces of the project "Community Health Care Cloud Platforms" in Java.
 - Assisted in testing web pages of the online user platform over 80 hours.
- COURSES & PROJECTS** *EE 660 Machine Learning from Signals: Foundations and Methods* (ongoing)
- Matlab and Python programming of regression/classification problems, working on some of Kaggle competitions.
- CSCI 576 Multimedia Systems Design*
- C++ programming and OpenCV utilization, including compression&distribution algorithms, ego-centric video processing (fast indexing, summarization, stabilization), industrial multimedia pipelines, Multimodal analysis of media, stereoscopic and holographic display.
- EE 586 Advanced DSP Design Laboratory*
- Embedded C programming of Tetris Game on DSP processors, including Ostu's binarization, morphological operations, Moore-Neighbor tracking, k-curvature pinpoint, Kalman filter, etc.
- EE 569 Introduction to Digital Image Processing*
- C++ and Matlab programming, including the implementations of: texture classifiers & SVM, structured-edge, morphological processing and shape matching, Optical Character Recognition, the snake algorithm and level-set algorithm.
- CSCI 574 Computer Vision*
- C++ programming and OpenCV utilization, including SIFT & RANSAC object matching, Structure from Motion, K-means clustering, Bag of Features Object Recognition, neural networks.
- AWARDS** COMAP 2013 MCM Meritorious Winner.
2011, 2012, 2013 1st-class college scholarship at BUPT.