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**SKILLS**

- Rich experience of software development: developed various systems about Computer Vision, Deep Learning and Motion Sensors with C++ and Python on Windows, Linux (PC and HPC) and Android platforms;
- Quick learning and problem-solving ability: started two new research projects on June 2014 and October 2015 respectively, and achieved excellent results under time constraints.
- Teamwork capability: worked as lead developer in 5 research projects and contributed to opensource projects.

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**EDUCATION**

<b>Ph.D., Zhejiang University, Computer Science, State Key Lab of CAD&amp;CG</b>	2011 - Present
Research Area: Deep Learning, Computer Vision, Sensor-based Action Recognition	
<b>B.S., East China University of Science and Technology, Computer Science</b>	2007 - 2011
Ranking 1/252	

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**HONORS**

- Two silver medals of ACM International Collegiate Programming Contest (ACM/ICPC) Asia regional
- National second prize of China Undergraduate Mathematical Contest in Modeling
- First-class scholarship (2009, 2010 and 2011)
- Scholarship of Shanghai Chemical Industry Park (2010)
- Outstanding B.S. Thesis

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**EXPERIENCE**

<b>Marker-less 3D Human Motion Capture with Monocular Camera</b>	October 2015 - April 2016
Lead Developer	Zhejiang University, National University of Singapore

Paper: ECCV 2016. Yu Du, et al. "Marker-less 3D Human Motion Capture with Monocular Image Sequence and Height-Maps".

Skills: Matlab, Caffe, GPU Cluster

<b>Gesture Recognition Based on Surface Electromyography (sEMG)</b>	November 2014 - Present
Lead Developer	Zhejiang University

We developed a real-time gesture recognition system, including 20 finger gestures and 30 hand gestures of Chinese sign language. This system recognizes gestures using a Deep Convolutional Network with our newly developed high density sEMG acquisition device worn on forearm.

**Contributed 5 Pull Requests to MxNet, a deep learning framework**

- 4 bugfix, including one fatal bug (PR 2366)
- Deep Residual Network example (PR 2046)

Paper: Nature Scientific Reports (under review). W Geng, **Yu Du**, et al. "Gesture recognition by instantaneous surface EMG images".

Patent: CN105608432A

Skills: C++, Python, MxNet, Caffe, CUDA, Qt, OpenCV, Scikit-learn, Docker, GPU Cluster

## **Video Synopsis for Surveillance**

June 2014 - September 2014

Lead Developer (Intern)

National University of Singapore

We developed a video synopsis system which provides a short video representation while preserving the essential activities of the original video. The activity in the original video is condensed into a shorter period by simultaneously showing multiple activities, even when each activity originally occurred at different temporal space.

Home page: <http://sesame.comp.nus.edu.sg/project/application#369>

Skills: C++, OpenCV

## **Context-Awareness on Mobile Devices**

March 2013 - June 2014

Lead Developer

Zhejiang University, Huawei Technologies Co. Ltd

Context-awareness on mobile devices with front camera, accelerometer, magnetic sensor and gyroscope. The contexts include reading, walking, running, driving and falling down.

Patent CN104463201A

Skills C++, Python, Android NDK, OpenCV, Qt, Scikit-learn

## **Action Recognition based on Motion Sensors**

September 2011 - June 2016

Lead Developer

Zhejiang University

We developed a real-time motion capture and action recognition system based on wearable accelerometer, magnetic sensor and gyroscope. This system can recognize 7 upper-body actions.

Skills C++, OGRE 3D