He Zhao

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EDUCATION

Sep. 2015 – Mar. 2017
UNIVERSITY OF FLORIDA Gainesville, USA

- Master of Science in Computer Science, Graduate School of Liberal Arts and Science
- **GPA: 3.94/4.0**

Sep. 2010 – June 2014
ZHENGZHOU UNIVERSITY ZhengZhou, China

- Bachelor of Engineering in Communication Engineering
- **GPA: 3.50/4.0**

RESEARCH EXPERIENCE

Aug. 2016 - Present (Research Member) Gainesville, FL
FCN, CNN AND HED DEEP LEARNING COMPARATION REVIEW

- Based on medical image data provided by BICI2 lab, implemented fully connected network, holistically-nested edge detection methods and got a better detection and segmentation effect compared with random forest method. Now working on residual neural network to achieve better result and keep digging on deep learning.

Apr. 2016 – July 2016 (Team Leader & Main Programmer) Gainesville, FL
RANDOM FOREST - MACHINE LEARNING BASED MUSCEL CELL IMAGE SEGMENTATION

- Developed a cpp software implementation of an image segmentation algorithm based on Random Forest Machine Learning algorithm, for Muscle Cell Image gathered from University of Florida Shands Hospital. Combined with Histogram Segmentation algorithm for feature extraction, Watershed and self-defined Hierarchical segmentation framework for segmentation, this cpp dll-call software works quite well for our muscle cell data. Video demo can be seen soon online.

Jan. 2016 – Mar. 2016 (Research Member and Programmer) Gainesville, FL
LBP BASED FACE RECOGNITION AND DPM OBJECT TACKING IMPLEMENTATION

- Built a Local Binary Patterns based software for face recogition, together with Deformable Part Model for object tracking. Implementation these two effective algorithms for contruction site videos with the aim to prevent from stranger invading and fire-fighting equipments stealing. Now we are heading towards implementing MOT on large-scale construction site video to monitor multiple objects. Video demo can be seen soon online.

Sep. 2015 – Nov. 2015 (Main Programmer) Gainesville, FL
PYTHON FLASK FRAMEWORK BASED CELL EDGE ONLINE ANNOTATION

- Using python FLASK framework as back-end to build up a website, which shows our recent accomplishments on Cell-Image Segmentation Research. With Flask's strong server-client interaction functionality, visitors would be able to modify the contour of cell online and re-submit it back to server. To make it more interactive, we use deep zoom package, paper.js and openseadragon as well.

Sep. 2015 – Oct. 2015 (Programmer) Gainesville, FL
MUSCLE CELL EDGE LABELING ON MEDICAL IMAGE

- Using matlab toolkit manually modify medical Image contour, which is quite important for for further deep learning training.

WORKING & PROJECT EXPERIENCE

Nov. 2015 – Feb. 2016 Gainesville, FL

FARMLAND DATA QUERY WEBSITE AND JS GRAPH

Mainly charged for web development and database interaction using html, CSS, Javascript, PHP and Mysql, which allow users to login the system and check out their farm condition. Also worked on front-end web deployed on Google App Engine, which can show dynamic graph of weather information such as wind-speed and rainfall, basically using javascript Graph API.

Mar. 2016 – July. 2016 Gainesville, FL

ARCGIS MAP CUSTOMIZING FOR FLORIDA AUTOMATED WEATHER NETWORK

Under the contract Florida Department of Agriculture & Consumer Services, I am working on GIS webpage building, using ArcGIS Javascript API and ArcMap software. The goal is building up a map that pinpoints all weather monitoring stations in Florida and allows farmers to see the weather condition on their field and gives them warnings to protect from weather damage. (Link: http://test.fawn.ifas.ufl.edu/mffw/index.html)

Jan. 2015 – June. 2015 China

INTERNSHIP AT CHINA TELECOM INC.

Responsible for Switch Machine Maintenance and EPON (Ethernet Passive Optical Network) deployment for several universities and companies.

SKILLS & LANGUAGES

- **Experience**: Solid Knowledge and Extensive Lab Experience in Machine Learning, Deep Learning and Computer Vision Related Field.
- **Programming**: Proficient in Java, C++, MATLAB and Python.
- **Software & Systems**: Familiar with Windows and Linux Operation Systems; Microsoft Visual Studio, Eclipse; OpenCV; Keras, Theano, Caffe deep learning framework; Visio, LaTex Software.
- **Languages**: Fluent in written and spoken English, Native in Mandarin.

HONORS & AWARDS

- **Academic Honor: Achievement Award for 1500$ each semester,** University of Florida (2015)
- **Outstanding Academic Achievement for 4.0 GPA in first semester,** University of Florida (2015-2016)
- **Nation Encouragement Scholarship for high ranking academic performance**, ZhengZhou University (2010-2011)
- **Three times First Level Scholarship,** ZhengZhou University (2011-2014)
- **Second Prize in Robotic Programming Competition among China**, ZhengZhou University (2013-2014)
- **Application Patent of Automatic Protection of Car Remote Starter**, ZhengZhou University (2013-2014)
- **Outstanding Graduates Essay**, ZhengZhou University (2014)

SELF EVALUATION

- Solid Academic Research and Learning Ability
- Strong Problem-solving and Trouble-shooting Skills
- Excellent Communication and Presentation Skills
- Goal-oriented, Self-starter, Team-player
- Passionate, Creative, Pressure-resistant