Xiao Xia

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EDUCATION

Beihang University, Beijing, China — ***Sep. 2015 – Jun. 2018***
M.Eng. in Electronic and Communication Engineering — GPA: 3.86/4.0

China Agricultural University, Beijing, China — ***Sep. 2011 – Jul. 2015***
B.Eng. in Electronic and Information Engineering of Honors Program — GPA: 3.49/4.0 (Junior/Senior: 3.74)

- **TOEFL: 106** (R29 + L28 + S24 + W25) — ***Sep. 2017***
- **GRE: 326** (V159 + Q167) + AW3.5 — ***Apr. 2017***

PROJECT EXPERIENCE

Application of Deep Learning Theory in SAR Target Recognition — ***Oct. 2016 – Present***
Graduation Thesis — *Beihang University*

- **Content:** Used Convolutional Neural Networks (CNN) for Synthetic Aperture Radar (SAR) image denoising and target classification. Achieved excellent classification accuracy rate of 99.42% on the MSTAR database.
- **Responsibility:** Designed and tested the network's structure through cross validation. Developed scripts (Python/MATLAB) and accelerated the training process with GPU.
- **Innovation:** Proposed a novel denoising method of dividing the CNN-predicted multiplicative noise from the original SAR images. Extracted multi-scale features from the network to enhance classification performance.

Mini Smart Greenhouse Based on Microcontroller — ***Apr. 2014 – May. 2015***
Science and Technology Innovation Project of Honors Program — *China Agricultural University*

- **Content:** Monitored and automatically controlled greenhouse with STC90C516, digital sensors, and control equipment. Also achieved manually control via commands sent through the local computer as well as the Internet.
- **Responsibility:** Used Altium Designer and Keil to carry out circuit design and microcontroller development, respectively. Developed a desktop application and a website using C#, HTML, JavaScript, and PHP.
- **Innovation:** Proposed an automatic control algorithm to provide optimal environment for different plants.

Portable Beef Quality Classification System Based on DSP — ***Dec. 2013 – Nov. 2014***
National Undergraduate Students' Science and Technology Innovation Project — *China Agricultural University*

- **Content:** Used a DM642 Digital Signal Processor (DSP) to segment rib-eye images collected by a CCD vision sensor. Extracted beef marbling to help the classification excel manual classification by 25% in accuracy.
- **Responsibility:** Studied and summarized numerous image segmentation algorithms. Implemented algorithms on DSP using Code Composer Studio and the C programming language.
- **Innovation:** Improved the Ostu algorithm to better preserve the texture details in beef marbling.

PUBLICATION

- Xiao XIA, Yunneng YUAN, *Combination of Multi-Scale Convolutional Networks and SVM for SAR ATR*, 2018 2nd IEEE Advanced Info. Management, Comm., Electronic and Automation Control Conference. (Accepted, EI index)

AWARDS

Scholarship for Excellent Graduate Student, *Beihang University* — ***2015 - 2017***
Scholarship for Academic Progress, *China Agricultural University* — ***2014***
Scholarship for Excellent Undergraduate Student, *China Agricultural University* — **2012 - *2014***

ACTIVITIES

Member of the Computer Association at China Agricultural University — ***Oct. 2011 – Nov. 2014***

- Held professional training sessions in C++ Programming, Visual Studio, and Altium Designer.
- Participated in public welfare activities, such as free computer maintenance for students.