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 — 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 — *Beihang University*
Graduation Thesis — *Oct. 2016 – Present*

- **Contents:** Used Convolutional Neural Network (CNN) for Synthetic Aperture Radar (SAR) image denoising and target classification. Achieved excellent classification accuracy 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 by dividing the CNN-predicted multiplicative noise from the original SAR images. Extracted multi-scale features from the network to enhance the classification performance.

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

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

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

- **Contents:** Used DM642 Digital Signal Processor (DSP) to segment the rib-eye images collected by a CCD vision sensor. Extracted the beef marbling to help the classification accuracy excel manual classification by 25%
- **Responsibility:** Studied and summarized numerous image segmentation algorithms. Implemented algorithms on DSP using Code Composer Studio and C programming language.
- **Innovation:** Improved the Ostu algorithm to better preserve the texture details of 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 Student, *China Agricultural University* — 2012 - *2014*

ACTIVITIES

The member of the Computer Association — *Oct. 2011 – Nov. 2014*

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