

EDUCATION

University of Electronic Science and Technology of China (UESTC, China)

09/2016-07/2020

Bachelor of Engineering in Computer Science and Technology Yingcai Honors College (An honors college for students of top 2%)

GPA: 3.99/4.0 Ranking: 3/238 Credit: 142

Awarded National Scholarship in 2018; awarded College Merit Scholarship in 2017, 2018 and 2019

University of Wisconsin-Madison (UW-Madison, US)

09/2018-12/2018

Exchange Program in Computer Science

GPA: 4.0/4.0 Credit: 13

Awarded "Visiting International Student Academic Award" by UW-Madison

TOFEL: 106 GRE: Verbal: 160, Quantitative: 170 (AW: 4.5)

PUBLISHED PAPERS

Mehraveh Javan, **Xianda Xu**, Marco Pedersoli. *Convolutional Neural Networks without Pooling or Fixed Filter Sizes*. submitted to WACV 2020

Xianda Xu, Marco Pedersoli. A Computing Kernel for Network Binarization on PyTorch. arXiv: 1911.04477, 2019.11

Xianda Xu, Yibing Xiao. *A Preliminary Study of Krush-Kuhn-Tucker Conditions*. Mathematics Fields (pp. 137-142), 2017.12

RESEARCH EXPERIENCES IN AI

MITACS Globalink Research Internship (École de Technologie Supérieure, Canada)

06-09/2019

Research Intern with full scholarship (one of 200 people chosen from all over China); supervised by A.P. Marco Pedersoli

- Developed convolutional neural networks without pooling or fixed filter sizes by combining techniques of multiple resolutions and differentiable architecture search (improved the accuracy compared with neural networks with manual architecture design)
- Developed an open-source computing kernel for network binarization on PyTorch (accelerated inference of the binarized model by about 3 times on GPU and 4.5 times on CPU)

Machine Learning and Artificial Intelligence Reading Group (UW-Madison, US)

09-12/2018

- Organized discussion "Model Compression and Acceleration"; presented and discussed with group members ([Archived](#))
- Reviewed current research work and discussed the future trend on topics like "Manipulators Restoring Rubik's Cube"

Study in Computer Vision

03-06/2018

Under the supervision of Associate Professor Fumin Shen, Center for Future Media, UESTC

- Selected network binarization to implement the compression and acceleration of models in deep learning and provided an evaluation of it in Tensorflow
- Studied papers to understand the research progress in computer vision
- Took the online course *CS231n: Convolutional Neural Networks for Visual Recognition* lectured by Feifei Li

Preparation in Machine Learning

09/2017-01/2018

Under the supervision of Prof. Zenglin Xu, Statistical Machine Intelligence & Learning Lab, UESTC

- Implemented advanced machine learning techniques including algorithms in classification, regression and clustering
- Took the course *Machine Learning* by Andrew Ng on Coursera and completed its programming assignments of basic machine learning techniques

WORKING EXPERIENCES

QuindiTech (Montreal, Canada) | Part-time Developer

06-09/2019

- Developed an e-mail automation system for a trading company that could reply e-mails automatically
- Involved in other Robotic Processing Automation programs like an online face recognition automation system

"Chuanglian" Software Development Workshop, UESTC | Developer in the iOS software development Team

09/2016-05/2018

Design of "Knoface" | *Group Leader* & responsible for designing user-interactive software and Bluetooth communication

- Excellent Award with 2000 RMB (top 10%) in National Innovation and Entrepreneurship Competition for College Students

- Designed the user-interactive iOS application using Object-C on the Xcode platform
- Configured communication between the BLE device and the software using the Peripheral mode of the CoreBluetooth framework ; communication between the BLE device and other BLE devices using the Central mode of the CoreBluetooth framework

Design of “My Diary” (a notepad software on iOS) | *Independent Project*

Design of “Star of Philosophy” (an online learning platform on iOS for college students) | *Major Participant*

OTHER CREATIVE PROJECTS

Social Media: “IdeaShare” | *Major Participant*

03-06/2019

- Applied SSM framework with Spring, SpringMVC, and MyBatis
- Utilized MySql as the database, Bootstrap as the front-end framework, and Ali cloud server as the cloud server

Automatic Watering System based on Soil Moisture for Pot Plants | *Major Participant*

03-06/2017

- Selected DS18B20 and Moisture Sensor for testing temperature and moisture; utilized AD converter to convert the analog signal to the digital signal and send it to the Single-Chip Micropython. Programmed the control module of Single-Chip Micropython

OTHER RESEARCH PROJECTS

The Implementation of Convolutional Neural Networks for Object Detection on FPGA | *Major Participant*

05-06/2018

- Designed a convolutional neural network using Verilog on the Vivado platform to identify "handwriting" numbers
- Applied the network structure of Le-Net and used MNIST as the dataset for training and testing

Design of MIPS Microprocessors on FPGA | *Major Participant*

03-06/2018

Responsible for designing MIPS microprocessor (including designing ALU operation module and system module)

- Utilized the prefix adder and the 16×16 multiplier in the ALU operation module
- Designed totally three different microprocessor systems. The single-period pipeline one reached 50M processing speed on FFT-8 instruction sets with an SNR of 72dB

Flotherm-based Heat Dissipation Optimization for High-powered PC Mainframe | *Independent Project*

04-05/2017

- Explored PC internals on the platform Flotherm to pursue a higher dissipation performance
- Improved the heat dissipation by splitting the GPU, adding heating pipes, improving fins and optimizing materials
- Reduced the noise to 28.1dB with internal chips less than 95 degrees (the requirement for practical application)

SOCIAL PRACTICES

Huadong Paper Machinery (Shanghai, China) | *Manager Assistant with Salary*

07-08/2018

- Presented for the company's products like CCR calendar and three-roller embossing machine in business negotiations
- Received customers like the director of Ernst & Young LLP (India)

Ufrate (Silicon Valley, California, USA) | *Marketing Intern (Excellent Student Intern)*

07-08/2017

- Took business lectures at UC-Berkeley
- Participated in the design of exhibition badges with Bluetooth communication to facilitate business research
- Visited high-tech companies in Silicon Valley including Google, Apple and Tesla

ACTIVITIES

School of Computer Science and Engineering (Chengdu, China) | *Student Staff*

03/2019-07/2020

- Served undergraduates in School of Computer Science and Engineering

College Football Team (Chengdu, China) | *Captain*

03/2018-07/2020

- Won the 3rd place in the university football league
- Awarded the university's “Top Ten Athletes”

“Green Ribbon” Volunteer Association (Chengdu, China) | *Vice Director*

09/2016-06/2017

- Organized “Metro Volunteer Service”
- Participated in “Library Volunteer Service”

Amateur Pianist

- Obtained the Amateur Top-level Certificate of Piano in Shanghai Conservatory of Music
- Played piano accompaniment in the college choir competition and won the second prize
- Won the first prize of the provincial piano solo competition