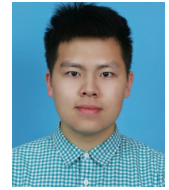




电子科技大学

Ziyang Long

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EDUCATION

University of Glasgow & University of Electronic Science and Technology of China

Sep 2018

B.Eng in Electronics and Electrical Engineering expected in Jul.2022

Cum.GPA: 3.61/4.00 (Major GPA: 3.79)

IELTS: 7.0

RESEARCH EXPERIENCE

An image logical operation unit inspired by human retina

Apr 2021 - Jun 2021

Research assistant in Photoelectric Detection and Sensing laboratory , UESTC

Chengdu

- Designed bionic analog logic-gate circuit referring to the human retina
- Eliminated noise in electric currents deriving from the power source
- Tested digital logic to ensure accuracy of image processing

Noninvasive blood glucose detection with flexible two-dimensional materials

Jul 2019 - Mar 2021

Research assistant in Information Materials and Devices team, UESTC

Chengdu

- Realized the analog amplifier and filter of biological current
- Developed a website and an Android application to demonstrate the data using Alibaba cloud server(ACS)
- Established the correlation between the peculiarity of reflected electromagnetic wave(0.5GHz-3GHz) and the concentration of blood glucose by using various data analysis methods with Gaussian Process predominantly involved

PROJECT EXPERIENCE

A CNN for MNIST Handwritten Digit Classification

Mar 2021 - Jun 2021

Introduction to Deep Learning Course Program

- Built a neural network in the main structure of two convolution layers and two pooling layers by Matlab
- Adopted BP algorithm and SGD algorithm to update the parameters for each layer
- Chose ReLU as activation function in the hidden layers and Softmax as activation function in the output layer

Portable Finger Pulse Monitor

Aug 2018 - Jan 2019

Microelectronic System Course Program, Glasgow

- Transformed analog signals from Pulsesensor into digital signals by STM32 and adopting moving average filter algorithm to diminish the thorns and slight oscillation in signal
- Counted the number of crests of the signal in a certain period
- Connected STM32 and an LCD screen by UART protocol on the Mbed platform

PUBLICATIONS

- Wen Du, Caihong Li, **Ziyang Long**, Yixuan Huang, Lingzhi Luo, Jihua Zou, Jiang Wu, Senior Member, IEEE , "An Image Memory Logic Unit Inspired by Human Retina", IEEE Electron Device Letters.
- Yixuan Huang, **Ziyang Long**, Jihua Zhou, Linzhi Luo, Student Member, IEEE, Xiangyu Zhou, Hezhuang Liu, Weijie He, Kai Shen, Jiang Wu, Senior Member, IEEE , "A glucose sensor based on surface functionalized MXene", IEEE Transactions on Nanotechnology.(under review)

PATENTS

- Box glucometer. CN. Patent ZL202130024461.3, filed January 14, 2021, and issued August 31, 2021.
- Photoelectric operation processor with memory function and preparation method. CN. Patent Application 202110740607, filed June 30, 2021, Patent Pending
- A WIFI-based blood glucose meter. CN. Patent Application 202120166412.8, filed January 21, 2021, Patent Pending

HONORS & AWARDS

Scholarship for Outstanding Students, Second Prize	2021.10
Provincial silver award in the 7th China International College Students "Internet" Innovation and Competition	2021.09
Pacemaker to Merit Student, UESTC	2020.10
The First Prize in School Venture Contest	2020.11
Outstanding Recruitment Volunteer, UESTC	2019.03

SKILLS

- **Program Languages:** Python, C++, HTML, CSS, Javascript, Verilog
- **Software:** Vivado, Auto CAD, Origin, Cadence, Altium Designer, Sublime3, Matlab, Multisim