HANGZHENG LIN

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EDUCATION

Zhejiang University *August 2017 - Present*
Dual degree program in Zhejiang University/University of Illinois at Urbana-Champaign Institute
Major: Electrical and Computer Engineering
Expected Graduation Date: June 2021

University of Illinois at Urbana-Champaign *August 2019 - December 2019*
Exchange Student in Department of Electrical and Computer Engineering

UIUC GAP: 3.94
ZJU GAP: 3.97

ACADEMIC INTERESTS

Interested in **Artificial Intelligence**, especially about the **Deep learning**. Recently, I am researching a fast and accurate method to detect aggressive behavior and human falling.

RESEARCH EXPERIENCE

Human Falling Detection by Optical Flow and CNN *January 2020 - May 2020*
Advisor: Volodymyr Kindratenko
The project intends to use optical flow and Convolutional Neural Network to train a neuro-based model to detect human falling.
Implemented an end-to-end human falling detection model from catching data by camera to providing alarm.

Deep Learning Models for Human Aggression Detection *May 2020 - Present*
Advisor: Volodymyr Kindratenko
The research project aims to reproduce and compare several version-based neural network model on human aggressive behavior.
We not only attempted to retrain other researchers' model, like the VGG, SNN, Transfer Learning model, conv-LSTM, etc. but also run them in our own dataset which we manually cut and labeled from internet to evaluate their flexibility.

INTERNSHIP EXPERIENCE

Wanke Energy Technology Co., Ltd (Wanke Engery) *January 2018 - May 2020*
During this internship, I wrote a python script to automatically test the anti-pressure ability of the company website, and provided test case as well.

Huawei HiSilicon *July 2019 - August 2019*
I was involved in Huawei Turing department and participated in the development of Da Vinci chip operators. Da Vinci chip is one of the most advanced Neural network chip in the word.
Most of my tasks were trying to accelerate the data transmission by calculating the best way to allocate the moving data and how to divide each part of data and their corresponding buffer and cache.
Finally I successfully reduce the transmission delay from 15ms into 3ms.

COMPETITION EXPERIENCE

2019 Mathematical Contest in Modeling problem B *January 2019*
Advisor: Wei Liu, Assistant Professor of Division of Sustainable Buildings Department of Civil and Architectural Engineering KTH Royal Institute of Technology
The B problem asked teams to select, configure, optimally pack, geoposition, deploy and operate a set of midsize (group 2) unmanned aerial vehicles (UAV) that would supplement existing relief medical supply chains on Puerto Rico.
We use 3D Bin-Packing, AHP, Greedy Algorithm, Graph theory, etc, to provide a model to solve the two NP problems.
Our paper finally get the Outstanding Winners (0.1%) and the Informs Award(0.02%)
Certificate: here

SKILLS

Programming Languages	C++, C, Python, SystemVerilog
Package & Tools	Tensorflow, Git, Shell, Latex, Matlab
Languages	Chinese, English

SELECTED HONORS & AWARDS

Zhejiang Provincial Government Scholarship	**2019**
Zhejiang University Scholarship - First Prize	**2019**
Outstanding Student of Zhejiang University	**2019**
First-class Scholarship of ZJUI	**2019**
Academic Excellent Award of Zhejiang University	**2019**
Student Leadership Award of Zhejiang University	**2019**
Student Innovation and Entrepreneurship Award of Zhejiang University	**2019**
Academic progress Award of Zhejiang University	**2019**
Brave star of Huawei	**2019**
Top ten Social Practice Teams of Zhejiang University	**2019**
Academic Excellent Individual of Zhejiang University	**2018**
Third-class Scholarship of ZJUI	**2018**

RELEVANT COURSEWORK

ECE120-Intro to Computing **A**
learned about assembly language and some basic concepts of machine-level architecture.

ECE220-Computer Systems & Programming **A**
learned about assembly language and some basic concepts of machine-level architecture.

CS225-Data Structures **A+**
learned concepts and applications of basic data structures, implementing data structures with C++

ECE374-Algorithms & Models of Computation **A**
learned design and analysis of algorithms, formal automata, computability, and complexity.

CS447-Natural Language Processing **A**
learned basic concepts of computational linguistics, from morphology, syntax to semantics, nlp applications such as syntax parsing, machine translation, generation and dialog systems.

CS418-Interactive Computer Graphics **A+**
learned 3D photorealistic rendering and the current rendering methods used in games and other interactive applications.

ECE385-Digital systems Laboratory **A+**
Design, build, and test digital systems using transistor-transistor logic (TTL), SystemVerilog, and field-programmable gate arrays (FPGAs).