Curriculum Vitae

PANG, QI
Zhejiang University
Electronic Information Engineering
Chu Kochen Honors College

Education

Zhejiang University (ZJU) Sept.2016--Present

- **Junior student of Electronic Information Engineering**
- **GPA:** 3.91/4.0, 88.72/100
- **Ranking:** 3/90
- **Related Courses:** Calculus, Linear Algebra, Probability and Mathematical Statistics, Complex Variable Functions & Integral Transformation, Partial Differential Equations, Numerical Method, Fundamentals of Programming, Lectures on C programming, Fundamentals of Data Structure, Object-Oriented Programming, Computer Network & Communication, Principle and Interface Technology of Microprocessors, Signal Analysis and Processing, Circuit and Electronic Technology.

Honors and Awards Sept.2016--Present

- First-Class Scholarship for Outstanding Merits (top 3%) 2016-2018
- National Encouragement Scholarship (top 5%) 2016-2018
- First Prize, Research and Innovation Scholarship of ZJU 2017-2018
- First Prize, National Mathematics Competition for College Students (highest score) Nov. 2017
- First Prize, Physics Competition for College Students in Zhejiang Province Jan. 2018
- Honorable Mention, Mathematical Contest in Modeling Mar. 2018

Research Experience

Moiré ID Sept.2018--May.2019

Advisor: Prof. Wenyuan Xu and Prof. Xiaoyu Ji

- Based on the theory of Moiré pattern – a type of artifacts produced by rendering programs, this project provides a possible solution to one tough topic – traceability of photos and videos captured by digital cameras.
- Established a mathematical model which measures the response of human eyes to the brightness of the image to make the pattern seems natural.
- Used discretized bipolar non-return-to-zero method to encode, and designed a corresponding decode system which achieved an accuracy higher than 92%.
- Moiré pattern is utilized for camera-captured image tracking, which is the first attempt in this field.

Group Image of Consumers Apr.2019--May.2019

Advisor: Prof. Peng Cheng

- Established a model to quantify the credit of consumers on the basis of multi-dimensional features.
- Combined traditional machine learning algorithm and DNN structure.
- The result ranked top 5% in Kaggle.

iCare Aug.2018—Sept.2018

Advisor: Prof. Wenyuan Xu and Prof. Xiaoyu Ji

- Used data from sensors of the mobile phones to identify the age of the user to prevent children from playing mobile phones in absence of their parents.
- Recorded touch behaviors and extracts hand geometry, finger dexterity and hand stability features that capture the age information from the raw data.
- Conducted experiments on a hundred people, and used the features to train a classifier which can achieve more than 95% accuracy for child identification.
- Tried LSTM to improve the accuracy.

Internship in ZJU Robot Vision Lab **Dec.2017--Aug.2018**

Advisor: Prof. Xiaowei Zhou

- Used convolutional neural network to distinguish the hand-writing digit, finally achieved an accuracy more than 98%.
- Used several layers of a well-trained neural network and gram matrix to transform the style of an image to another.
- Used color recognition to locate the robot and in most conditions, and used control science to make sure the robot can catch the ball and shoot it into the goal.
- By analyzing the signals from the robot's sensors and using the knowledge of control science, the robot can get out of the maze.

Competition

National Mathematics Competition for College Students **Nov. 2017**

- This contest tested the students' basic ability in mathematics.
- Got the highest score in Zhejiang province.

Physics Competition for College Students in Zhejiang Province **Jan. 2018**

- This contest tested the students' basic ability in physics.
- Won the first price in this competition.

Mathematical Contest in Modeling **Mar. 2018**

- A mathematical model was established to simulate the transmission and reception of electromagnetic waves.
- Simulated the reflection of ground, buildings, and sea.

Mathematical Contest in Modeling **Jan. 2019**

- Established a mathematical model to give the best route for the escape of the Louvre.
- Different scenarios of tourists and rescuers were simulated.

Technical Skills

- **Programming Language:** Python, C/C++, VHDL, Matlab, Assembly Language.
- **Software:** CADANCE, Wireshark, Jupyter Notebook.
- **Deep Learning & Computer Vision:** Pytorch, Tensorflow, openCV
- **Operating System:** Linux, Windows
- **Others:** Excellent abilities in mathematics, physics and computer science.