

XIAOQIANG WANG

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🎓 EDUCATION

Zhejiang University, Computer Science and Technology

2016-09 – Present

- GPA 3.88/4
- First-Class Scholarship for Outstanding Merits (Top 10%) 2017-10
- Second-Class Scholarship for Outstanding Merits (Top 30%) 2018-10
- Second-Class Research Innovation Scholarship 2018-10

🐱 INDIVIDUAL PROJECTS

EigenFace

<https://github.com/Robert-xiaoqiang/EigenFace>

An implementation of PCA for face recognition based on OpenCV

- Image preprocess, face alignment with Haar feature
- Eigen value decomposition of covariance matrix of the face dataset
- Similarity evaluation based on Euclidean distance

ML Naive Projects

<https://github.com/Robert-xiaoqiang/ML-Pits>

ML classic algorithms or models

- CNN, LSTM, SVM, CART, Bayesian for classification
- Ensemble Learning such as AdaBoost, random forest
- Hierarchy Cluster, segmentation

MiniOS Kernel

<https://github.com/Robert-xiaoqiang/OSProject>

An Operating System kernel based on MIPS32 architecture running on FPGA 5-stage pipeline CPU

- Virtual File System, Implementation of FAT32 and ext2 file system, implementation of system calls and file commands such as **cd**, **ls**, **cat**
- Process Schedule, Multiple queues with feedback with the help of my classmates

Naive DBMS

<https://github.com/Robert-xiaoqiang/MiniSQL-TeamLanTianLiuShe>

A simple DBMS for ZJU DataBase System curriculum project

- Index Module, Implementation of B+Tree in memory
- SQL Interpreter, Based on Lex, Yacc

⚙️ SKILLS

- **Programming Language:**
 - C++/Python/C/Bash
 - Java/Golang/MATLAB
- **Development Skills and Tools:**
 - OpenCV, Qt, Django
 - TensorFlow, PyTorch, MySQL, Hadoop, Redis, Git

📄 OTHER

- **Home:** <http://qindomitable.top/>
- **Language:** English - read docs, speak fluently Chinese - native level
- **Hobbies:** Basketball
- **Self Assessment:** Cautious, willing to learn

PERSONAL STATEMENT

Xiaoqiang Wang

I'm Xiaoqiang Wang, an undergraduate with GPA 3.88 / 4 in Chu Cochen Honors College ZheJiang University. Thank you for reading my statement of purpose in the busy schedule. I am applying for the summer research in your lab. **If possible, I hope this research will start in July, 2019 and last more than 2 months.** As an undergraduate majoring in Computer Science, I found that I deeply enjoyed learning about programming and systems analysis, and with my strong mathematics background I performed very well in courses concerning numeric analysis, statistics, and computer vision. Therefore, now I am enthusiastic about Computer Vision and Machine Learning and eager to obtain an opportunity of researching abroad this summer for further studying and more in-depth practice.

1 About my research experience

My classmates and I participated in the SRTP (Student Research Training Plan) initiated by the school. We are working on a multi-layer networks generating model. With complex social networks as the background, the network will be layered according to the attributes of nodes, considering the coupling between layers. It was also selected as a national-level innovation project. Now a model proposed is a multi-layered stochastic block network. All of the probability parameters can be estimated by the maximum likelihood method. We can perform a layer-to-layer coupling analysis, link prediction, and detection of fake nodes based on a given actual social network (such as Sina Weibo). The project makes a difference to my scientific research thinking and qualification.

In addition, I also work on porting an existing deep learning model of video resolution to a mobile device. As we know, OpenCL API has been supported in some kinds of modile GPUs. Thus, my task is to implement an API for Android or iOS operating system.

2 About my learning in CV and ML

My interests in computer vision mainly comes from the course the fundamentals of machine learning and computer vision in the school. In these courses, I have a good knowledge of the principles and practices of classic machine learning algorithms, such as Logistic Regression, K Nearest Neighbors, Decision Trees,

SVM besides CNN, unsupervised learning, and reinforcement learning. It is the implementation by myself of some algorithms that makes me more passionate about this field. I am convinced that the enthusiasm paved the way for me to do related research program in the future.

With regard to computer vision, I have learned the basic and mainstream methods of computer vision, such as feature detection, camera calibration, stereo vision reconstruction, target tracking and BoW methods. I have programmed PCA-based face recognition algorithm, motion recognition based on optical flow, and OCR recognition based on TensorFlow CNN. that it will constitute a crucial stepping-stone for me to a more competitive, elite and international platform.

3 About my plan and interest

I plan to combine my interests and the direction of the lab's subject. While continuing to learn theoretical knowledge during the summer research, I will carry out corresponding project and steel myself in the rigorous scientific researches process. In detail, my interest lies in semantic segmentation. 3D medical computer vision and pathological image analysis also appeals to me. At present, I am learning related works and projects.

As far as I am concerned, The combination of medical and 3D computer vision is exhilarating and beneficial to the humankind. There is no doubt that it is also one of the best and most meaningful practice to make artificial intelligence serve life and turn scientific research into products. This is a promising subject and I am willing to work for it and explore it in depth with the convenience to human life and the splendid sense of accomplishment.

Although I long to study further in the field and conquer the sophisticated puzzles, I am clearly aware of the breadth of this field and the nearly endless possibilities for further study. Thus it is necessary to study for a doctoral degree in the field of CV or related fields, when I complete my undergraduate degree in the future. This summer research experience will be a rare opportunity to truly train and practice myself.

Ultimately, thank you for reading my statement of purpose again. I believe I can make an of great significance and purpose contribution to the project while gaining a great deal of personal satisfaction if I have an opportunity.

Zhejiang University

Student's Academic Records

Registration No: 20191123

Name: WANG Xiaoqiang		College/Dept.: College of Computer Science & Technology				Speciality: Computer Science and Technology				Student ID: 3160101819			
Sex: Male		Birthday: 10/01/1998		Birth Place: Nei Mongol		Entrance Date: 09/01/2016		Graduation Date: 06/30/2020		Years of Program: 4Years			
Academic Year 2016-2017			Physics I (H)		4.0	98	Integrate Practice for Courses II		2.5	95			
Courses(1st Term)	*Cr	*Sc	Engineering Graphics		2.5	85	Operating System		5.0	90			
Environment Remediation and Ecosystem Health	1.5	91	Military Training		2.0	78	Intro.to Mao Thought & Theoretical System of China Socialism		4.0	81			
Economy of Contemporary China	1.5	84	Academic Year 2017-2018			Computer Architecture		3.5	91				
Sports Dancing (For Boys: Basic Level)	1.0	76	Courses(1st Term)	*Cr	*Sc	Theory of Computation		2.0	90				
Introduction to Sociology	1.5	90	Integrate Practice for Courses I		2.5	96	Computer Networks		4.5	85			
General Chemistry (H)	3.0	93	Basketball (Basic Level)		1.0	79	Java Application Design		2.5	95			
Oral English	1.0	85	Discrete Mathematics		3.0	93	Computer Vision		2.0	96			
Fundamentals of Programming	3.0	94	Probability and Mathematical Statistics		2.5	100							
Mental Education and Foundation of Law	2.5	88	Physics Lab II		1.5	91							
Mathematical Analysis (A) I (H)	4.5	97	Physics II (H)		4.0	95							
Modern Chinese History (H)	2.5	91	Fundamentals of Data Structures		2.5	89							
Linear Algebra I (H)	3.5	91	Object-Oriented Programming		2.5	99							
Courses(2nd Term)	*Cr	*Sc	Digital Logic Design		4.0	95							
General Chemistry Experiment (B)	1.0	86	Courses(2nd Term)		*Cr	*Sc							
Career Planning	1.5	89	Basketball (Basic Level)		1.0	86							
Situation and Policy I	1.0	74	Computer Graphics		2.5	88							
College English Band IV	3.0	74	Database Systems		4.0	77							
Physics Lab I	1.5	89	Living Things and Evolutionary Design		1.5	83							
Basketball (Basic Level)	1.0	80	Linux Application		2.0	93							
Military Theory	1.5	87	Python Programming		3.0	99							
Introduction to the Principle of Marxism	2.5	92	Advanced Data Structure & Algorithm Analysis		4.0	83							
Mathematical Analysis (A) II (H)	4.5	88	Computer Organization		4.5	90							
Philosophical Consciousness	3.0	B	Academic Year 2018-2019										
Lectures on C Programming	2.0	94	Courses(1st Term)	*Cr	*Sc								

Overall GPA:3.88/4.0(89.42/100)

Degree Granted:

Credits Required for Graduation: 152+4+6

Credits Obtained: 128.5

Three grade systems are used simultaneously in Zhejiang University,specifically as follows(*Cr=Credits,*Sc=Score):

- 1.The percentage system: Above 60 is passing,100 is full mark;
- 2.Five degree grading:Excellent(A),Good(B),Fair(C),Passing(D),Failed(E);
- 3.Two degree grading:Passing(P),Failed(F).
- 4.Courses identified with * are those which are transferred from partner universities and keep their original records.
- 5.Courses identified with △ are retaken and calculated into GPA according to the highest score.

Dean, Undergraduate School:

张光新

Date Issued:03/26/2019

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INSTRUCTION:

- 1.The fluorescent school badge of ZHEJIANG University on the higher left corner will appear under the UV light.
- 2.The words "ZJU" on the center of the report will turn purple under the sunlight.
- 3.The words "ZJU" on the center of the report will turn purple under the sunlight.
- 4.This style transcript has been formally in use since September 1,1999.