XIAOQIANG WANG

lacktriangleq 3160101819@zju.edu.cn \cdot lacktriangleq (+86) 188-6811-6331 \cdot $lacktriangleq Robert-xiaoqiang <math>\cdot$ Research Intern(07/2019,>=2 months)

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 http:

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

i 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 pave 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 programed 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 meangingful practice to make artificial intelligence serve life and turn seientific 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

THE RESIDENCE TO SERVICE OF THE PROPERTY OF THE PARTY OF	College/Dept.: College of Computer Science & Technology Birthday: 10/01/1998 Birth Place: Nei Mongol						Speciality: Computer Science and Technology							Student ID: 3160101819		
THE RESERVE OF THE PROPERTY OF				lace: Nei Mongol			Entrance Date: 09/01/2016			Graduation Date: 06/30/2020			20 Years of Pro	Years of Program: 4Years		
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Environment Remediation and Ecosystem Health	1.5	91	Military Training	2.0	78	Intro.to Mao Thought & Theoretic System of China Socialism	al 4.0	81	CHARLEST ENVIOLE	no (pero-leum) a	DOG:	DENAGDAX	SKEDANGDANGESE	SIA PODA	(1,822-)	
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Sports Dancing (For Boys: Basic Level)	1.0	76	Courses(1st Term)	*Cr	*Sc	Theory of Computation	2. 0	90	CHANGERS ENAMOUS	an weightenand an detherand	LIMAN LOS	OHEAN BODAN	WENNESDAY (BENE	AND DESCRIPTION	U EXT	
Introduction to Sociology	1.5	90	Integrate Practice for Courses I	2.5	96	Computer Networks	4.5	85	DANGERSKANDE DANGERSKANDE	ANGERHERAG GROSHEANG	DAXUE	DIESAN ODAKIS	ZIERAMODANIEZIE	AN DEAD	V = 12.34	
General Chemistry (H)	3.0	93	Basketball (Basic Level)	1.0	79	Java Application Design	2.5	95	DANGER PANGO	AN CERT ENANG	CARCE	DEAN ODANG	ZHERAKODAX (EZHE	AND DIDAD	UBZ-	
Oral English	1.0	85	Discrete Mathematics	3.0	93	Computer Vision	2.0	96	DAKORDEHWOD	o de la	DAXUE	DIERA GDANG	ZO EJANODAŽ (GZO E	SALDDAY	(EZ)	
Fundamentals of Programming	3.0	94	Probability and Mathematical Statistics	2.5	100	ADUJEN EARKODAD (JEZH EARK	DD NOTUER	BEARO	DANGER-EPAYOD	OLOTO ENAMO	DAXUE	OHENAN GEVANUS	ZHERANDDAX (RZVE	AAU ODAY	0 521	
Mental Education and Foundation of Law	2.5	88	Physics Lab II	1.5	91	ANGED ENAVODAR (DEZ ENAV	ODANUEZ ODANUEZ	DEMAN	DANKOTO ERANDEN	Greek Earle Greek Earle	DANGE	CHEMAN GDAN	ZHERANGDAKUEZHE	AN GLAD	UEZH	
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Modern Chinese History (H)	2.5	91	Fundamentals of Data Structures	2.5	89	ANGED EN ANGENE DE PAN	OD WUM	DEDANG	DANGERONE ANOTH	M(SEZ) EARO	OALN (GE	DESIAN DIDARKU	ZHENAKOTAN (EZHE	MAN GENOY		
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Physics Lab I	1.5	89	Living Things and Evoltionary Design	1.5	83	DIGIO ENAVODAX OS DE LAN	opiwies	EJANO	CANCELOEANODA	N (EZ) EAAND	DADLOS	HEALA GOADLO	上出基抗丰	田音』		
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Introduction to the Principle of Marxism	2.5	92	Advanced Data Structure & Algorithm Analysis	4.0	83	AN OTO ENAVOIRE (SEE EAA)	DE SALVES DE SALVES	S EANG	DAR (SEX) ERHYODA DAR (SEXHERAVODA	NUTE OF ENAMES	DADKUEL	HEAN ODANG	Overall GPA:3.88/4.0(89.42/100)			
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1. The percentage system: Above 60 is passing, 100 is full mark;

Registration No: 20191123

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.

3. Courses identified with * \(\Delta \) are retaken and calculated into GPA according to the highest score, the magnifying glass ZHEJIANG University on the highest effection will among under the IV links.

Dean, Undergraduate School:

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Date Issued: 03/26/2019

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