

Northwestern | THE GRADUATE SCHOOL

Application for Admission

App Type **New Student** Submitted Date **11-17-2018** App ID# **78305889**

Intended Status Entry **Fall 2019** Quarter Prior TGS Applicant (Program)

Last Name **Zhu** First **Xiaohan** Middle

Gender Pronouns (US only) Birthdate **02-09-1997** Gender **Female**

Program **Computer Science: MS** Secondary PhD (MEAS Only)

Specialization/Area of Interest **Graphics** MS Consideration (MEAS Only)

Cluster

JD/PhD No DPT/PhD No Fee Waiver US Vet/Active Forces

Ethnicity **Asian** Hispanic **No**

Citizenship **CHINA** Visa

Citizenship Status **International Student**

Country of Birth **CHINA** Green Card #

Current Address Permanent Address
Room 308, Bldg. Mengminwei
Zhejiang University [Zijingang Campus]
Hangzhou, 310058
CHINA

Current Phone **+86 18867106646** Permanent Phone

Cell Phone Preferred Phone **Current Phone Number**
Number

Email Address **xhzapply@outlook.com**

Previous Institution	From	To	Field of Study	Level	Degree	Date
Zhejiang University	09-01-2015	06-30-2019	Landscape Gardening		International Undergraduate Degree	06-30-2019
Queensland University of Technology	02-19-2018	06-22-2018	Interaction Design		International Non-Degree coursework	

Cumulative UG GPA	3.95	UG Junior/Senior Year GPA	<input type="text"/>
Cumulative UG GPA - Unconverted	<input type="text"/>	Max UG GPA Scale	<input type="text"/>
Cumulative Grad GPA	<input type="text"/>		
Cumulative Grad GPA - Unconverted	<input type="text"/>	Max Grad GPA Scale	<input type="text"/>

Letters of Recommendation

1. **Jared Donovan** j.donovan@qut.edu.au
 2. **Wei Chen** chenwei@cad.zju.edu.cn
 3. **Qi Wang** qiqi@fb.com
 - 4.
 - 5.
-

Are you interested in studying with specific faculty members? (List names below)

1. First Name **Darren** Last Name **Gergle**
 2. First Name **Ying** Last Name **Wu**
 3. First Name Last Name
 4. First Name Last Name
-

Please indicate the highest level of education completed by your parent(s) or guardian(s) (the one or two people most responsible for raising you)

First individual's highest level of education completed: **Some high school or less**

If other, please explain:

Second individual's highest level of education completed: **Some high school or less**

If other, please explain:

Language

Reading

Writing

Speaking

Self-Reported Test Scores

GRE Gen **02-02-2018** Verbal **154** **65** Quant **170** **96** A.W. **3.5** **41**

GRE Sub LSAT

TOEFL **03-24-2018** Ovr **106** Read **27** List **27** Speak **24** Writ **28** IELTS Ovr

GMAT Tot Verb Quant A.W. I.R.

MCAT Bioscience Verbal Physical Science

Please list any honors you have been awarded
China National Scholarship, awarded by Chinese Ministries of Education and Finance;
Zhejiang Provincial Government Scholarship, awarded by Ministry of Education and Finance of Zhejiang Province;
Zhejiang University First Prize Scholarship, awarded by Zhejiang University.

Have you applied for or been awarded an external fellowship?

Yes No If yes, please specify:

Please describe your plans for the future.

I plan to enter the high-tech industry and conduct research on social data visualization, learning how the interaction between human and computer could help us better understand people, communications and society.

Other Universities Applied (in preferred rank order)

- | | |
|---------------------|-------------------|
| 1. School Drop Down | 5. School "other" |
| 2. School Drop Down | 6. School "other" |
| 3. School Drop Down | 7. School "other" |
| 4. School Drop Down | 8. School "other" |
-

Academic misconduct? Yes No Convicted of crime? Yes No

If answered yes, applicant is asked to upload explanation. If uploaded, explanation will be attached to end of application PDF.

Statement of Purpose

Xiaohan Zhu
Zhejiang University
Applying for Master of Science in Computer Science

As a female once influenced by gender stereotype and grew up with her ability of self-improvement, I developed an interest in computer science because of its inclusiveness, for it not only involves in different fields to address various problems but also embraces diversity in its community.

Working in high-tech industry and changing people's lifestyle with computer technology have always been my dream. Even though I got high scores in science subjects with a top rank in the class, being afraid of the stereotype that women in STEM are dull and less competent, I gave up the opportunity to major in Computer Science. Still feeling interested in computer technologies but unconfident to completely turn myself toward STEM, I learned Interaction Design during exchange semester and on the Internet. However, I have always been curious about what went on behind the curtains, instead of the design process. Therefore, I began exploring computer system and would like to pursue a systematic graduate-level study from Northwestern University, which will definitely help enhance my engineering skills and prove my competence as a female.

I discovered my ability in computer science in my exchange semester at the Queensland University of Technology, Australia, during which I independently developed a game based in Java and Processing in 8 weeks. Pursuing a higher quality of the project, in addition to course materials, I completed 3 Coursera courses in OOP and advanced data structure. Massively adopting different OOP design principles, I was highly commented on this well-maintained project and received the highest score (7.0 out of 7.0). Meanwhile, with a big interest, I finished 3 Java projects online with excellent results — an auto-correct text editor, a GUI application finding the shortest path, and visualization of worldwide earthquakes. These successful projects proved my competence in learning computer science and encouraged me to dive deeper, despite the deep-seated stereotype.

As a self-motivated learner, to make up for non-major in computer science, I devoted most of my time to the exploration of computer system. Having earned 17 certificates in Coursera and edX, I strengthened mathematics knowledge with linear algebra and discrete mathematics courses, explored computer architecture learning operating system, mastered languages learning C, C++, Java, data structure and algorithm and gained familiarity with statistics by taking R courses. In addition to learning and coding 8 hours every day, I have practised algorithm on LeetCode. These experiences have consolidated my foundation in computer science.

With a strong desire to learn something new, I joined a visualization lab at Zhejiang University and was in charge of a project visualizing the information of Chinese female

poets. Taking advantage of my strong background in design, I designed smart graphs to deliver information. As the project manager, I utilized Git to maintain multiple branches. For the front end, I used React.js and D3.js to achieve different functions. This project, which was published by the most significant Chinese press and received more than 100,000 views, was finished in 4 weeks, including the time I learned HTML, CSS, React.js, and D3.js from scratch. After this project, I organized and participated in Zhejiang University International Summer School on Visual Analytics, and took part in a project implementing a C++ data structure which hierarchically approximates the aggregated values of data. This experience gave me a chance to tackle large-scale dataset and made me realize that visualization is far more than vision.

Through my practices in visualization, I have developed an intention to visualize social data that can be easily understood by people. My design experience enables me to visualize different data in a succinct and elegant way and to treat visualization as a form of art. In addition, knowledge from many other fields in computer science are required to make data more understandable and to deal with various problems caused by the accumulation of data. Hence, I am pursuing a graduate study which could comprehensively consolidate my computer science background and give me insights into methods to develop efficient and human-centered visualization techniques. When preparing for my future study, I became interested in the projects from the CollabLab conducted by Prof. Darren Gergle, since interactive experience brings insights into novel visualization technologies and help us better understand people, communications and the society.

I believe the comprehensive program with breadth and width from Northwestern University could build me a solid background in computer science and the intense training could prepare me for my future research. By joining your dynamic community, I could learn to collaborate with outstanding talents and show my competence as a female. With abilities to maintain collaborative projects and to quickly master cutting-edge methods, I believe my programming experience, academic preparation, clear goal, and personal qualities have prepared me for your expectations of a graduate student who can contribute to your community through collaboration, communication and enthusiasm.

Zhejiang University

Student's Academic Records

Registration No: 20173284

Name: ZHU Xiaohan	College/Dept.: College of Agriculture & Biotechnology					Speciality: Landscape Gardening					Student ID: 3150100046	
Sex: Female	Birthday: 02/09/1997		Birth Place: Sichuan			Entrance Date: 09/01/2015			Graduation Date: 06/30/2019		Years of Program: 4 Years	
Academic Year 2015-2016			Academic Year 2016-2017			Agricultural Practice	1.0	90				
Courses(1st Term)	*Cr	*Sc	Courses(1st Term)	*Cr	*Sc	Academic Year 2017-2018						
Military Training	2.0	89	Sketch I	2.5	90	Courses(1st Term)	*Cr	*Sc				
The History and Culture of Dunhuang	1.5	86	Use of Colors	2.5	95	Mapping Practice of Ancient Architecture of Gardens	1.5	89				
Organic Chemistry Experiment	1.5	95	Sketch II	2.5	90	Landscape Plants Investigation	1.0	82				
College English Band III	3.0	96	Use of Colors II	2.5	95	Design of Landscape Buildings I	1.5	89				
Organic Chemistry	4.0	90	Introduction to Public Economics	1.5	A	Landscape Ecology and Landscape Architecture	2.0	88				
OutwardBound	1.0	91	Golf	1.0	97	Computer Assistant Design in Landscape Architecture	2.0	86				
Calculus I	4.5	83	Military Theory	1.5	86	Arts of Nutrition & Health	2.0	97				
Mental Education and Foundation of law	2.5	89	Introduction to the Principle of Marxism	2.5	85	Ornamental Botany II	3.0	87				
Mental Hygiene	1.5	93	Descriptive Geometry	2.5	95	Design of Landscape Buildings II	1.5	84				
Fundamentals of Computer Science	2.0	85	Basic Design of Landscape Architecture	4.0	86	Building Materials	2.5	92				
Courses(2nd Term)	*Cr	*Sc	Career Planning	1.5	93	A CONCISE HISTORY OF WESTERN MUSIC	1.5	89				
Calculus II	2.0	84	Form (Three-Dimensional Construction)	2.0	80	Courses(2nd Term)		*Cr	*Sc			
Language & Culture: Comparison Between Chinese & English	1.5	85	Botany and Experiments (B)	3.0	95	Landscape and Garden Plant Scenery Construction-Principle and Method	2.0	90				
College English Band IV	3.0	95	Courses(2nd Term)		*Cr	*Sc	Urban Planning for Green belt	2.0	76			
Situation and Policy I	1.0	80	Painting from Life with Chinese Brush I	2.0	95	Design for Interactive Media*	12	7				
College Physics Experiment (D)	1.0	91	Civil Engineering Graphing	2.0	84	Interface Design*	12	6				
General Chemistry Experiment	2.0	87	Painting from Life with Chinese Brush II	2.0	95	Programming for Visual Designers*	12	7				
University Physics (C)	4.0	100	Taekwondo Training	1.0	92	Academic Year 2018-2019						
Modern Chinese History	2.5	84	Engineering Surveying (B)	1.5	94	Courses(1st Term)		*Cr	*Sc			
OutwardBound	1.0	93	Japanese II	3.0	91	Practice teaching of Landscape Planning & Design	1.5	86				
Inorganic & Analytical Chemistry	4.0	91	History and Art of Gardening	5.0	90	Practice in Landscape Buildings Design	1.5	85				
SCHOOLS OF MODERN GERMAN LITERATURE	3.0	B	The Strengthened Japanese II	5.5	90	Practice Ability & Quality Development	4.0	A				
JAVA Programming	3.0	91	Ornamental Botany I	3.0	86							
Credits Required for Graduation: 160+4+6				Credits Obtained: 147.5					Degree Granted:			

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 transferred from partner universities.
- 5.Courses identified with "S" are retaken and calculated into GPA according to the highest score.

张利新

Wei Minfei

Date Issued: 10/10/2018

Overall GPA: 3.95/4.0(89.67/100)
The third year GPA: 3.92/4.0(89.51/100)



(Blank back side page)

浙江大学学生成绩一览表

登记号: 20173284

姓名: 朱筱涵	院系: 农业与生物技术学院					专业: 园林					学号: 3150100046		
性别: 女	生日: 1997年02月09日		出生地点: 四川			入学日期: 2015年09月01日			毕业日期: 2019年06月30日			学制: 4年	
2015-2016学年			2016-2017学年			农艺实践		1.0	90				
第1学期课程	学分	成绩	第1学期课程	学分	成绩	2017-2018学年							
军训	2.0	89	素描 I	2.5	90	第1学期课程	学分	成绩					
敦煌历史与文化	1.5	86	色彩 I	2.5	95	园林古建测绘实践	1.5	89					
大学化学实验 (O)	1.5	95	素描 II	2.5	90	园林植物综合实习	1.0	82					
大学英语III	3.0	96	色彩 II	2.5	95	园林建筑设计 I	1.5	89					
有机化学	4.0	90	公共经济学概论	1.5	优秀	景观生态学与园林建设	2.0	88					
户外拓展	1.0	91	高尔夫球	1.0	97	园林计算机辅助设计	2.0	86					
微积分 I	4.5	83	军事理论	1.5	86	营养与健康之艺术	2.0	97					
思想道德修养与法律基础	2.5	89	马克思主义基本原理概论	2.5	85	园林植物学 II	3.0	87					
心理卫生	1.5	93	画法几何	2.5	95	园林建筑设计 II	1.5	84					
计算机科学基础	2.0	85	园林设计初步	4.0	86	建筑材料	2.5	92					
第2学期课程	学分	成绩	职业生涯规划	1.5	93	西方音乐简史	1.5	89					
微积分 II	2.0	84	立体构成	2.0	80	第2学期课程	学分	成绩					
中英语言与文化比较	1.5	85	植物学及实验 (乙)	3.0	95	植物造景	2.0	90					
大学英语IV	3.0	95	第2学期课程	学分	成绩	城市绿地系统规划	2.0	76					
形势与政策 I	1.0	80	中国画写生与速写 I	2.0	95	Design for Interactive Media*	12	7					
大学物理实验 (丙)	1.0	91	土木工程制图	2.0	84	Interface Design*	12	6					
大学化学实验 (G)	2.0	87	中国画写生与速写 II	2.0	95	Programming for Visual Designers*	12	7					
大学物理 (丙)	4.0	100	跆拳道	1.0	92	2018-2019学年							
中国近现代史纲要	2.5	84	测量学 (乙)	1.5	94	第1学期课程	学分	成绩					
户外拓展	1.0	93	日语 II	3.0	91	园林规划设计实践	1.5	86					
无机及分析化学	4.0	91	园林史与园林艺术	5.0	90	园林建筑设计实践	1.5	85					
现代德语文学流派	3.0	良好	强化日语II	5.5	90	第二课堂	4.0	优秀					
Java程序设计	3.0	91	园林植物学 I	3.0	86								
毕业最低学分应为: 160+4+6				已获得学分: 147.5					授予学位:				

记载成绩说明:

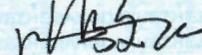
1. 百分制: 60分及60分以上为及格、100分为满分;
2. 五级计分制: 优秀、良好、中等、及格、不及格;
3. 二级计分制: 合格、不合格;
4. 标志“*”者为校外转入的课程。

5. 带“△”课程为重复修读课程, GPA按最高成绩计算。RECOGNITION INSTRUCTION ZHEJIANG UNIVERSITY is microprinted on the lower right corner as a line, they can be seen under the magnifying glass.

2.The fluorescent school badge of ZHEJIANG University on the higher left corner will appear under the UV light. 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.

副教务长:

张光新

经办人: 

签发时间: 2018年10月10日



所有学年GPA: 3.95/4.0 (89.67/100)
第三年GPA: 3.92/4.0 (89.51/100)

(Blank back side page)

The system of General Point Average(GPA)

The system of GPA used for academic transcript of Zhejiang University is established as follows:

1. The relation of score to grade point:

Percentage System	Score	100-86	85-83	82-80	79-77	76-74	73-71	70-68	67-65	64-62	61-60	<60								
Five Degree Grading	Grade Point	4.0	3.9	3.6	3.3	3.0	2.7	2.4	2.1	1.8	1.5	0								
Two Degree Grading	Score	Excellent (A)	Good (B)			Fair (C)			Passing (D)			Failed (F)								
	Grade Point	4.0	3.5		2.5			1.5			0									
	Score	Passing (P)										Failed (F)								
	Grade Point	3.0										0								

2. Formula:

$$\text{GPA} = \frac{\sum (\text{credits} * \text{grade point})}{\sum \text{ credits}}$$

Undergraduate School
Zhejiang University



QUT Academic Record

ID Number : 10177647

Name : Xiaohan Zhu

Page 1 of 1

University Exchange Semester

Units of Study

Unit Code	Unit Title	Grade	Description	Credit Points
Semester 1, 2018				
DXB301.1	Interface Design	6	Distinction	12
DXB303.1	Programming for Visual Designers	7	High Distinction	12
DXB403.1	Design for Interactive Media	7	High Distinction	12

Course Grade Point Average (GPA): 6.667

Course requirements completed on 4/07/2018

End of Record 10177647

CERTIFIED

ADAM WILLIAMS

UNIVERSITY REGISTRAR

An original document bears a signature on blue/grey QUT security paper. A photocopied document bears the word 'COPY'.

The microprinting security line which reads 'Queensland University of Technology' under magnification will not be readable on a copy.

DATE: 20/07/2018

Queensland University of Technology

GPO Box 2434
Brisbane Qld 4001 Australia
Phone +61 7 3138 2000

www.qut.edu.au



Queensland University of Technology

QUT Grading Scales

Grade	From Semester 1, 2009	From Semester 1, 1991
7	High Distinction	
6	Distinction	
5	Credit	
S	Satisfactory	
4	Pass	
3	Fail	Low Pass
S3	Not Applicable	Pass Supplementary
U	Unsatisfactory	
2	Fail	
S2	Not Applicable	Fail Supplementary
1	Low Fail	
K	Withdrawn - Failure	
A	Result Unfinalised	
SA	Supplementary Assessment	
DA	Deferred Assessment	
T	Assessment Continues	

The language of instruction at QUT is English.

An Academic Record issued by the Queensland University of Technology may include studies undertaken at the following institutions:

Queensland Institute of Technology (QIT) 1964–1988

Brisbane College of Advanced Education (BCAE) 1982–1990

Kelvin Grove College of Advanced Education (KGCAE) 1976–1981

Kelvin Grove College of Teacher Education 1974–1975

Kelvin Grove Teachers College (KGTC) 1961–1973

Queensland Teachers College (QTC) 1914–1961

North Brisbane College of Advanced Education (NBCAE) 1975–1981

Kedron Park Teachers College (KPTC) 1961–1974

Brisbane Kindergarten Teachers' College (BKTC) 1911–1981

If you require further information about your academic record from QUT or any predecessor institution refer to web link

www.student.qut.edu.au/studying/graduating/academic-records

Grade Point Average (GPA) is calculated from the grades obtained from semester one 1985 onwards and weighted by the credit points of the unit using the formula and assumptions as described in the Manual of Policies and Procedures (MOPP)

www.mopp.qut.edu.au

Xiaohan ZHU

<http://xhzhu.me>

Bldg. Mengminwei, Zijingang Campus, Zhejiang University, Hangzhou, China

GitHub: <https://github.com/visland> · Phone: (+86)188-6710-6646 · Email: xiaohan.zhu@outlook.com

EDUCATION

Zhejiang University, Hangzhou, China

Sep 2015 – Present

Bachelor of Agricultural Science, Expected Jun 2019

GPA: **3.95/4.0** Ranking: **1/33**

Queensland University of Technology, Brisbane, Australia

Feb 2018 – Jun 2018

Exchange Student, Interaction Design

GPA: **6.667/7.0**

EXPERIENCE

State key lab of Computer-Aided Design & Computer Graphics (CAD&CG)

Jun 2018 – Present

Research Assistant (Advisor: Prof. Wei Chen)

Zhejiang University, Hangzhou, China

- Implemented the RSATree data structure which hierarchically approximates the aggregated values of data
- Designed and implemented a web-based visual query system that supports progressive visual specification, along with a data preprocessor based on the **C++ language** which generates the RSATree data structure

Zhejiang University International Summer School on Visual Analytics

Jul 2018 – Aug 2018

Organizer, Participant

Zhejiang University, Hangzhou, China

- Organized the summer school with 12 lecturers and more than 150 participants
- Participated in the lectures and tutorials of advanced techniques for big data visualization and visual analytics

PROJECTS

TangPoet – data visualization of Chinese female poets

Jun 2018 – Sep 2018

Project Manager, Front-end Developer, Designer

State key lab of CAD&CG, Zhejiang University

- **Published** by Xinhua Net – Chinese most significant press and received more than 100,000 views
- Implemented a responsive and adaptive interactive web system visualizing data using **React.js** and **D3.js**
- Resolved module dependency, version control and system deployment with **Webpack** and **Git**

ReadyPlayerOne – an independently developed creative game

Mar 2018 – Jun 2018

Software Engineer, Interaction Designer (Advisor: Dr. Jared Donovan)

Queensland University of Technology

- Utilized **UML**, especially sequential and class diagrams during system design
- Adopted different OOP design principles and algorithms in **Java** and **Processing**
- Maintained readability of the project following Google Java Style Guide

TextEditor – an auto-correct text editor with multiple functions

Apr 2018 – May 2018

Software Engineer

University of California San Diego, Coursera

- Worked with Strings and Regular Expressions in **Java** to generate the Flesch Readability Score of user input
- Utilized Linked List and Tries for Markov Chain auto-complete text and Hash Map for calculating edit distance

EarthquakeMap – visualization of real-time worldwide earthquakes

Mar 2018 – Apr 2018

Software Engineer

University of California San Diego, Coursera

- Searched and sorted data of earthquakes and visualized their attributes using UnfoldingMaps **Java** library
- Implemented events and buttons responding to user interactions in GUI application

GraphMap – a GUI application finding the shortest path between source and sink

Feb 2018 – Mar 2018

Software Engineer

University of California San Diego, Coursera

- Created a class for map search engine and implemented weighed graph in **Java** to find the shortest path
- Used depth-first search and breadth-first search algorithms to generate the best route on a map

AWARDS

China National Scholarship (<i>Top 2%</i>)	Sep 2017
Zhejiang Provincial Government Scholarship (<i>Top 5%</i>)	Oct 2016
Zhejiang University First Prize Scholarship (<i>Top 8%, Twice</i>)	Sep 2016, Sep 2017

CERTIFICATES

Mathematics

- Mathematics for Machine Learning: Linear Algebra ([view](#))
- Combinatorics and Probability ([view](#))
- Introduction to Graph Theory ([view](#))

Imperial College London, Coursera
University of California San Diego, Coursera
University of California San Diego, Coursera

Computer Science

- Programming Fundamentals in C ([view](#))
- Writing, Running, and Fixing Code in C ([view](#))
- Object Oriented Programming in Java ([view](#))
- Intermediate C++ ([view](#))
- Advanced C++ ([view](#))
- Data Structures and Performance ([view](#))
- Advanced Data Structures in Java ([view](#))
- Social Computing ([view](#))
- Designing, Running, and Analyzing Experiments in R ([view](#))
- Introduction to Operating Systems (*No Certificate Provided*, [view course](#))

Duke University, Coursera
Duke University, Coursera
University of California San Diego, Coursera
Microsoft, edX
Microsoft, edX
University of California San Diego, Coursera
Georgia Tech CS 8803, Udacity

Interaction Design

- Human-Centered Design: An Introduction ([view](#))
- Information Design ([view](#))
- Input and Interaction ([view](#))
- User Experience: Research & Prototyping ([view](#))
- Design Principles: An Introduction ([view](#))

University of California San Diego, Coursera
University of California San Diego, Coursera

If any of the hyperlinks above is unavailable, please refer to <http://xhzhu.me> for more information

THIS IS A PDF DOWNLOADED AND PRINTED BY THE TEST TAKER, INTENDED FOR THE TEST TAKER'S PERSONAL RECORDS.

Name: Zhu, Xiaohan

Last (Family/Surname) Name, First (Given) Name Middle Name

Email: xiaohan.zhu@outlook.com**Gender:** F**Date of Birth:** 09 Feb 1997**Registration Number:** 0000 0000 3308 6873**Test Date:** 24 Mar 2018 **Sponsor Code:**

Zhu, Xiaohan
 211/141 Kelvin Grove Road
 Kelvin Grove
 Brisbane, Queensland 4059
 Australia

**Country of Birth:** China**Inst. Code** | **Dept. Code****Native Language:** CHINESE**Test Center:** STN15274A - Navitas English Test Centre - Brisbane**Test Center Country:** Australia**TOEFL iBT Scaled Scores**

Reading	27
Listening	27
Speaking	24
Writing	28
Total Score	106

Security Identification**ID Type:** Passport**ID No.:** xxxxxxxxxxxxxxxxxxxx7030**Issuing Country:** China

18

Reading Skills	Level	Your Performance
Reading	High	<p>Test takers who receive a score at the HIGH level, as you did, typically understand academic texts in English that require a wide range of reading abilities regardless of the difficulty of the texts.</p> <p>Test takers who score at the HIGH level, typically</p> <ul style="list-style-type: none"> have a very good command of academic vocabulary and grammatical structure; can understand and connect information, make appropriate inferences, and synthesize ideas, even when the text is conceptually dense and the language is complex; can recognize the expository organization of a text and the role that specific information serves within the larger text, even when the text is conceptually dense; and can abstract major ideas from a text, even when the text is conceptually dense and contains complex language.

Listening Skills	Level	Your Performance
Listening	High	<p>Test takers who receive a score at the HIGH level, as you did, typically understand conversations and lectures in English that present a wide range of listening demands. These demands can include difficult vocabulary (uncommon terms, or colloquial or figurative language), complex grammatical structures, abstract or complex ideas, and/or making sense of unexpected or seemingly contradictory information.</p> <p>When listening to lectures and conversations like these, test takers at the HIGH level typically can</p> <ul style="list-style-type: none"> understand main ideas and important details, whether they are stated or implied; distinguish more important ideas from less important ones; understand how information is being used (for example, to provide evidence for a claim or describe a step in a complex process); recognize how pieces of information are connected (for example, in a cause-and-effect relationship); understand many different ways that speakers use language for purposes other than to give information (for example, to emphasize a point, express agreement or disagreement, or convey intentions indirectly); and synthesize information, even when it is not presented in sequence, and make correct inferences on the basis of that information.



XIAOHAN ZHU
Most Recent Test Date: February 2, 2018
Address: ROOM 608, ZIYUN 5, ZHEJIANG UNIVERSITY (ZIJINGANG), HANGZHOU, 310058 China

Registration Number: 2829568
Print Date: August 15, 2018

Email: xiaohan.zhu@outlook.com

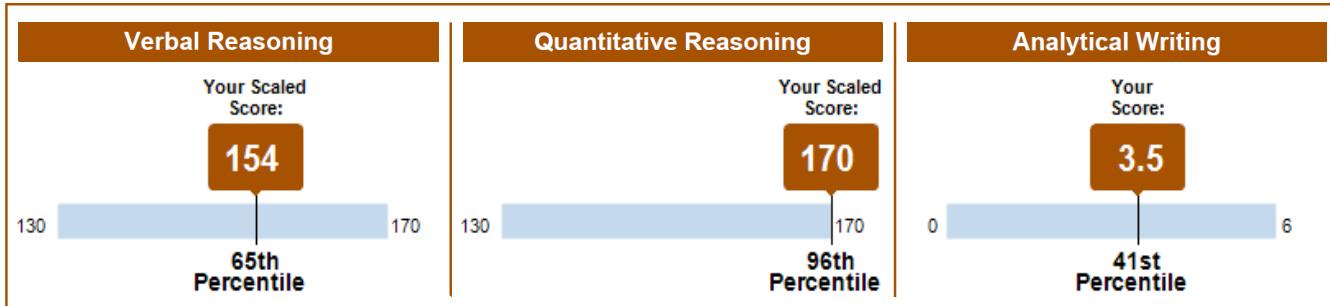
Phone: 86-18867106646

Date of Birth: February 9, 1997

Social Security Number (Last Four Digits):
Gender: Female

Intended Graduate Major: Landscape Architecture (4405)

Your Scores for the General Test Taken on February 2, 2018



Your Test Score History

General Test Scores

	Verbal Reasoning		Quantitative Reasoning		Analytical Writing	
Test Date	Scaled Score	Percentile	Scaled Score	Percentile	Score	Percentile
February 2, 2018	154	65	170	96	3.5	41
December 22, 2017	151	52	169	96	3.5	41

Subject Test Scores

You do not have reportable test scores at this time.

Your Score Recipient(s)

Undergraduate Institution

Report Date	Institution (Code)	Department (Code)	Test Title	Test Date

Designated Score Recipient(s)

Report Date	Score Recipient (Code)	Department (Code)	Test Title	Test Date

Note: This report is not valid for transmission of scores to an institution.

XIAOHAN ZHU**Most Recent Test Date: February 2, 2018****Date of Birth:** February 9, 1997**Registration Number:** 2829568**Print Date:** August 15, 2018

About Your GRE® Score Report

Score Reporting Policies

With the *ScoreSelect®* option, you can decide which test scores to send to the institutions you designate. There are three options to choose from:

- Most Recent option – Send your scores from your most recent test administration
- All option – Send your scores from all administrations in the last five years
- Any option – Send your scores from one OR as many test administrations in the last five years (this option is not available on test day when you select up to four FREE score reports)

Scores for a test administration must be reported in their entirety. Institutions will receive score reports that show only the scores that you selected to send to them. There will be no special indication if you have taken additional GRE tests. See the *GRE® Information Bulletin* for details. The policies and procedures explained in the Bulletin for the current testing year supersede previous policies and procedures in previous bulletins.

Scores will be sent to designated score recipients approximately 10-15 days after a computer-delivered test and 5 weeks after a paper-delivered test. If your scores are not available for any reason, you will see "Not Available" in Your Test Score History.

GRE test scores are reportable according to the following policies:

- For tests taken prior to July 1, 2016, scores are reportable for five (5) years following the testing year in which you tested (July 1 – June 30). For example, scores for a test taken on May 15, 2015, are reportable through June 30, 2020. GRE scores earned prior to August 2011 are no longer reportable.
- For tests taken on or after July 1, 2016, scores are reportable for five (5) years following your test date. For example, scores for a test taken on July 3, 2016, are reportable through July 2, 2021.

Note: Score recipients will only receive scores from test administrations that you have selected to send to them.

Percentile Rank (% Below)

A percentile rank for a test score indicates the percentage of test takers who took that test and received a lower score. Regardless of when the reported scores were earned, the percentile ranks for General Test and Subject Test scores are based on the scores of all test takers who tested within the most recent three-year period.

Retaking a GRE Test

You can take the *GRE®* General Test *once every 21 days*, up to *five times* within any continuous rolling 12-month period (365 days). This applies even if you canceled your scores on a test taken previously. You can take the paper-delivered GRE General Test and *GRE®* Subject Tests as often as they are offered.

Note: This policy will be enforced even if a violation is not immediately identified (e.g., inconsistent registration information) and test scores have been reported. In such cases, the invalid scores will be canceled and score recipients will be notified of the cancellation. Test fees will be forfeited.

For More Information

For information about interpreting your scores, see *Interpreting Your GRE Scores* at www.ets.org/gre/understand.

For detailed information about your performance on the Verbal Reasoning and Quantitative Reasoning sections of the computer-delivered GRE General Test, access the free GRE Diagnostic Service from your ETS account. This service includes a description of the types of questions you answered right and wrong, the difficulty level of each question, and the time spent on each question. This service is available approximately 15 days after your test administration and for six months following your test administration.

If you have any questions concerning your score report, email GRE Services at gre-info@ets.org or call 1-609-771-7670 or 1-866-473-4373 (toll free for test takers in the U.S., U.S. Territories and Canada) between 8 a.m. and 7:45 p.m. (New York Time).

Computer Science & Mathematics Coursework

Xiaohan Zhu

● Mathematics:

- **Calculus I**, university course at Zhejiang University, grade: 83/100
- **Calculus II**, university course at Zhejiang University, grade: 84/100
- **Mathematics for Machine Learning: Linear Algebra**, online course from Imperial College London & Coursera, certificate:
<https://www.coursera.org/account/accomplishments/verify/VJ8WBA7FXT3J>
- **Introduction to Graph Theory**, online course from University of California San Diego & National Research University Higher School of Economics & Coursera, certificate: <https://www.coursera.org/account/accomplishments/verify/F3N5F7TYSEV9>
- **Combinatorics and Probability**, online course from University of California San Diego & National Research University Higher School of Economics & Coursera, certificate: <https://www.coursera.org/account/accomplishments/verify/FMNN2JA5W7H7>

● Computer Science:

- **Fundamentals of Computer Science**, university course at Zhejiang University, grade: 85/100
- **JAVA Programming**, university course at Zhejiang University, grade: 91/100
- **Programming for Visual Designers**, university course at Queensland University of Technology, grade: 7.0/7.0
- **Programming Fundamentals in C**, online course from Duke University & Coursera, certificate: <https://www.coursera.org/account/accomplishments/verify/TJ9S7XVL2N5B>
- **Writing, Running, and Fixing Code in C**, online course from Duke University & Coursera, certificate: <https://www.coursera.org/account/accomplishments/verify/6QPE28PJWCXM>
- **Object Oriented Programming in Java**, online course from University of California San Diego & Coursera, certificate:
<https://www.coursera.org/account/accomplishments/verify/JWB8EH5W7KXD>
- **Data Structures and Performance**, online course from University of California San Diego & Coursera, certificate: <https://www.coursera.org/account/accomplishments/verify/BBPXPP228CKC>
- **Advanced Data Structures in Java**, online course from University of California San Diego & Coursera, certificate: <https://www.coursera.org/account/accomplishments/verify/QU9U4FSPG26E>
- **Intermediate C++**, online course from Microsoft & edX, certificate:
<https://courses.edx.org/certificates/2e0a63ab50aa4669b32b5f12a4259b28>
- **Advanced C++**, online course from Microsoft & edX, certificate:
<https://courses.edx.org/certificates/ad8dc921486f499492c9e5092a54e111>
- **Introduction to Operating Systems**, online course from Georgia Tech CS 8803 & Udacity, no certificate provided
- **Designing, Running, and Analyzing Experiments in R**, online course from University of California San Diego & Coursera, certificate:
<https://www.coursera.org/account/accomplishments/verify/SBQGU583KWWH>
- **Social Computing**, online course from University of California San Diego & Coursera, certificate: <https://www.coursera.org/account/accomplishments/verify/U4QW7LDRPN88>

Northwestern | THE GRADUATE SCHOOL

Recommendation Form

The Graduate School Northwestern University Evanston, IL 60208-1113

Applicant Name: **Xiaohan Zhu**

Program: **Computer Science: MS**

Applicant Waived Rights*: **This applicant has waived the right to view their recommendation.**

Recommender Name: **Jared Donovan**

Organization Name: **Queensland University of Technology**

Title: **Senior Lecturer**

E-mail Address: **j.donovan@qut.edu.au**

Telephone Number: **+61 7 3138 3135**

Relationship to Applicant: **Lecturer / Tutor**

Certification (Date): **10-07-2018**

*“Public Law 93-380, Educational Amendments Act of 1974, grants students the right to have access to letters of recommendation in their placement files. By selecting the "Waive access" option you are waiving access to these letters.”

Queensland University of Technology
Creative Industries Faculty

School of Design
2 George St,
Brisbane Qld 4000 Australia
Phone +61 7 3138 8114 Fax +61 7 3138 8116
Email creativeindustries@qut.edu.au
www.creativeindustries.qut.edu.au

To Whom It May Concern:

RE: Xiaohan Zhu - Recommendation

I was the lecturer, tutor and unit coordinator for Xiaohan Zhu in a third-year programming subject during her student exchange at the Queensland University of Technology during 2018. The subject, DXB303 Programming for Visual Designers, dealt with the creative application of programming techniques to produce creative visual and interactive outputs.

Based on my experience of teaching Xiaohan, I found her to be a serious, committed and diligent person. This unit required students to learn and apply programming concepts and develop an ability to produce working digital prototypes. Xiaohan proved herself a resourceful and hard-working student, who pushed well beyond what was required of her in the unit to produce a truly outstanding result. Even though English is not her first language, Xiaohan's written and spoken communication skills were always excellent. She was one of the most thoughtful and articulate students in the class.

Xiaohan's final project for the unit was particularly memorable. Responding to a brief to create an interactive experience to promote an upcoming movie, Xiaohan designed and developed an engaging and visually unique game related to the movie 'Ready Player One'. The game included five separate levels, incorporated several novel gameplay elements was implemented to a very high standard. Xiaohan was one of the most outstanding students in her semester and made a lasting impression on me for her dedication.

I am happy to discuss this recommendation further if you require any more information.

Yours truly,

Dr Jared Donovan

Senior Lecturer, Interaction Design
Creative Industries Faculty,
Queensland University of Technology
(t) 3138 3135
(e) j.donovan@qut.edu.au

Northwestern | THE GRADUATE SCHOOL

Recommendation Form

The Graduate School Northwestern University Evanston, IL 60208-1113

Applicant Name: **Xiaohan Zhu**

Program: **Computer Science: MS**

Applicant Waived Rights*: **This applicant has waived the right to view their recommendation.**

Recommender Name: **Wei Chen**

Organization Name: **Zhejiang University**

Title: **Dean of College of Computer Science**

E-mail Address: **chenwei@cad.zju.edu.cn**

Telephone Number: **+86 18698577066**

Relationship to Applicant: **Supervisor**

Certification (Date): **10-08-2018**

*“Public Law 93-380, Educational Amendments Act of 1974, grants students the right to have access to letters of recommendation in their placement files. By selecting the "Waive access" option you are waiving access to these letters.”



Oct 9, 2018

State Key Lab of CAD & CG
Campus Zi Jin Gang, Zhejiang University
866 Yu Hang Tang Road
Hangzhou, China

To whom it may concern,

I am pleased to recommend Xiaohan Zhu for your Master's program. I have learned a great deal about her and her abilities in computer science during her stay in the State Key Lab of CAD & CG at Zhejiang University since June 2018, and I know she would do well if given the opportunity to continue her education.

Xiaohan's persistence has led her to successful programs. Collaborating with two other team members, she designed and implemented the front-end part of a visualization project. Before the final release by Xinhua Net, there have been many issues identified in various platforms. Xiaohan has addressed them in time. She also showed great determination and inquisitiveness through a C++ project dealing with large-scale dataset. These projects are quite challenging even for students who major in computer science. Xiaohan has been always willing to ask questions and tackle problems with her self-motivation.

Xiaohan has worked diligently to improve her knowledge and ability in computer science. Her design background boosts her exploration and performance of visualization, and her passion made her consistently explore computer science. She not only showed the capability of self-improvement but also had excellent skills for teamwork. Through group works and ZJU International Summer School on Visual Analytics, her ability of organizing team working greatly impressed me.

I believe that Xiaohan would be an excellent candidate for your Master's program. I have no doubt that she will be quite suitable for the program and benefit your program.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Wei Chen".

Wei Chen
Dean of College of Computer Science
Zhejiang University

Recommendation Form

The Graduate School Northwestern University Evanston, IL 60208-1113

Applicant Name: **Xiaohan Zhu**

Program: **Computer Science: MS**

Applicant Waived Rights*: **This applicant has waived the right to view their recommendation.**

Recommender Name: **Qi Wang**

Organization Name: **Facebook UK Ltd.**

Title: **Software Engineer**

E-mail Address: **qiqi@fb.com**

Telephone Number: **+44.7783.151869**

Relationship to Applicant: **Tutor**

Certification (Date): **10-25-2018**

*“Public Law 93-380, Educational Amendments Act of 1974, grants students the right to have access to letters of recommendation in their placement files. By selecting the "Waive access" option you are waiving access to these letters.”

October 21, 2018

To Whom It May Concern,

It is my pleasure to write this letter of recommendation for Ms. Xiaohan Zhu who is applying for the admission to the master's program of Northwestern University.

I first came to know Xiaohan in my course of Java Programming when she was a first-year student. As the teaching assistant, I didn't expect non-STEM students to master the concept of object-oriented programming (OOP). Unlike others, she was not satisfied with knowing basic knowledge and consistently sought for the comprehension of advanced topics. I published 20 blogs to provide solutions and extended readings. However, only a few students would refer to my answers, let alone the recommendations. To my surprise, Xiaohan managed to gain some insights about OOP from these articles and even pointed out the mistakes I made in my blogs. I was deeply impressed by her because she not only ranked 5% in class and improved herself by devouring all the resources she could reach, but also helped me perfect my job.

I thought we might not come across again because she did not major in computer science. However, she reached out to me later asking if there were any computer science courses I would recommend. Given her limited choices regarding the course enrollment policy in school, I suggested her taking courses in Coursera. She keeps asking me questions as what she did 2 years ago. I saw her inquisitiveness and the gift she possesses through her insightful questions and I am proud that she has made so much progress in such a short time. I firmly believe that it would be a loss if the industry misses such a genius.

All in all, I would describe Xiaohan as an intelligent and diligent young woman who would always set high standards for herself. Her persistence, enthusiasm, and talents are the exact traits that the computer science industry needs the most. I have no doubt that she will be a valuable student of your master's program. I am more than willing to recommend her without any reservation.

Sincerely,

Qi Wang

Qi Wang
Software Engineer
Facebook UK Ltd.
qiqi@fb.com
+44.7783.151869