

Hongguang Zhang

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Personal Website: <https://howardzhg.github.io/>

EDUCATION

Hainan University

Bachelor of Science in Mathematics and Applied Mathematics

Summa Cum Laude and Outstanding Thesis

Thesis: A handwritten digit recognition algorithm based on spiking neural networks, supervised by Professor Siling Feng

Haikou, Hainan

09/2015 - 06/2019

Cumulative GPA: 3.4/4.0 (WES) Last 60 Credits GPA: 3.6/4.0 (WES)

Core Courses:

- Course Design of Probability Theory and Mathematical Statistics II (95/100)
- Data Analysis (88/100)
- Principle and technology of database (90/100)
- Numerical analysis (93/100)
- Course Design of Mathematical Modeling (90/100)
- Experiment of Mathematical Modeling (98/100)
- C++ Programming (97/100)
- Advanced Algebra II (90/100)

GRE: 322 (VR 157 73% QR 165 76% AW 3.5 38%) Registration No.: 2402808

Test Date: 10/27/2023

TOEFL: 102 (L 28 R 29 S 20 W 25) Appointment No.: 9151409238931426

Test Date: 09/16/2023

WORK EXPERIENCE

Hainan Dingyue Culture Media Co., Ltd.

Haikou, Hainan

Assistant Accountant

08/2019 - 01/2023

- Assisted in formulating the company's annual budget, regularly tracked and analyzed budget utilization, and produced quarterly budget tracking reports.
- Prepared various financial statements, performance accounting materials, and vouchers, including transfer payment receipts, work content records, salary disbursement sheets, and recorded company fund inflows and outflows.

Assistant Producer Director in promotional videos and documentaries

03/2020 - 01/2023

- Served as Assistant Director, assisting in script writing and post-production for 20 documentary and promotional films, such as:
 - "Series of 8 Hospitals in Hainan Province"
 - "Fiftieth Anniversary Promotional Film of Dongfang Third Primary School"
 - "Special Report about Sanya Center for Disease Control and Prevention"
 - "Fire Scene" Fire Safety Warning Educational Film
 - "Overseas Chinese Affairs During COVID 19"
 - "Cherish Life and Stay Away from Danger" for juvenile
 - "Intangible Cultural Heritage of Hainan Province"

RESEARCH EXPERIENCE

Project 1: A handwritten digit recognition algorithm based on spiking neural networks

01/2019-05/2019

Undergraduate Thesis

Supervised by Prof. Siling Feng, School of Information and Communication Engineering, Hainan University

- Developed a handwritten digit recognition algorithm utilizing gradient descent with momentum.
- Constructed a spiking neural network using the Tempotron algorithm, a supervised technique within spiking neural networks algorithms. Conducted testing using the MNIST dataset from the National Institute of Standards and Technology.
- Achieved a recognition rate of 92.00% through testing, showcasing the algorithm's substantial practical value.

Project 2: Comprehensive Technology Service Support Research for China (Hainan) Free Trade Zone 04/2018 - 10/2019

National Key Research and Development Project Declaration

Supervised by Prof. Siling Feng, School of Information and Communication Engineering, Hainan University

- Participated the sub-project "Research on Comprehensive Technological Support for China (Hainan) Free Trade Pilot Zone".
- Assisted in applying for national funding, including:
 - Compiled project budgets based on reliable sources of price information, including expenses for setting up testing servers, equipment costs for various types of workstations such as data modeling and analysis GPU computation servers, procurement of materials for experimental consumables, and personnel service fees.
 - Summarized and analyzed data on the research history, achievements, research requirements, and team composition of participating units in previous years related to the sub-project.
 - Assisted in writing the feasibility analysis of the project.

Project 3: Database Design of Employee Salary Management System

06/2018 - 07/2018

Supervised by Dr. Jiyun Guo, School of Mathematics and Statistics, Hainan University

• My work and contribution:

- Conducted a requirement analysis of the essential needs to define the design task, system functionalities, and data dictionary for the Employee Salary Management System database.
- Created entity-attribute diagrams and entity-relationship diagrams for four types of users: System Administrators, Finance Department Administrators, Human Resources Department Administrators, and Employees. These diagrams were integrated into an overall Entity-Relationship diagram, completing the logical structure design of the database.
- Developed various essential tables, views, indexes, triggers, and stored procedures, including Social Security Information View, Salary and Benefits Query Stored Procedure, and Social Security Ledger Generation Stored Procedure.
- Conducted testing on the database by importing information from 100 randomly generated employees and performing various queries, maintenance, and update operations using the Salary Management System database for different user roles.

Project 4: Computer Lab Duty Roster Arrangement

05/2018 - 06/2018

Supervised by Dr. Jinzhuan Cai, School of Mathematics and Statistics, Hainan University

• My work and contribution:

- Introduced 0-1 variables to represent binary discrete variables. Used the total weekly payment as the objective function and minimized it. Expressed various constraints using inequalities to establish a 0-1 linear programming model for scheduling and utilized LINGO software to solve the model. Obtained the optimal duty roster that minimizes the total weekly payment for the laboratory and determined the minimum weekly payment required.
- Generalized the problem to an n-person, k-days-per-round duty scheduling problem and formulated the mathematical model for the generalized problem.

Project 5: Research on Public Bicycle Service System

04/2018 - 07/2018

Supervised by Principal Zhigang Wang, School of Mathematics and Statistics, Hainan University

• My work and contribution:

- Preprocessed the Zhejiang Province public bicycle data using SPSS software and conducted frequency analysis and histogram plotting for each variable's descriptive statistics.
- Calculated the distances between different stations using the product of theoretical shortest travel time & speed between stations.
- Grouped the borrowing and returning time intervals into 1-hour intervals to establish a cross-tabulation table of station numbers and borrowing/returning time intervals, obtaining peak periods for borrowing and returning bicycles and the corresponding distribution of usage duration.
- Employed cluster analysis to classify stations with similar peak borrowing and returning periods into clusters. Identified the tidal phenomena. Proposed solutions and suggestions for station selection and efficiency improvement.

Project 6: CT System Calibration and Imaging

07/2017 - 09/2017

*China Undergraduate Mathematical Contest in Modeling (CUMCM)***International First Prize, Top 292/33062, Top 0.88% (almost 110,000 participants from Australia, Singapore and China)***Supervised by Principal Zhigang Wang, School of Mathematics and Statistics, Hainan University*

• My distribution: Leader

• My work and contribution:

- Implemented the local maximum search method to ascertain the geometric relationship between X-ray beams and the rotation center.
- Determined the inter-unit distances among detector elements.
- Formulated an algorithm based on the principles of filtered back projection and employed MATLAB for reconstructing received data from the CT system.
- Extracted pertinent information about the position, geometrical shape, and absorption characteristics of the unidentified medium within a square tray and provided absorption coefficients at specified locations.
- Constructed three evaluation metrics - the normalized mean squared distance criterion, the normalized mean absolute distance criterion, and the worst-case distance criterion - for the meticulous analysis of parameter calibration accuracy.
- Assessed the stability of parameter calibration by varying the rotation center's position and observing the ensuing accuracy fluctuations. Devised a novel template to enhance the precision and stability of calibration.

INTERNSHIP EXPERIENCE**NIIT Information Technology (Chengmai) Co., Ltd.**

Chengmai, Hainan

Trainee of R Programming Language

05/2018 - 06/2018

- Practiced in the application of R language, including data visualization, probability prediction, etc.
- Learned how to use R packages, such as "rvest", "party", "RSNNS", "rccp", "jiebaR", etc.

China Construction Bank, Hainan Branch*Data Analyst in Individual Loan Center, Housing Finance Department*

Haikou, Hainan

07/2017 - 08/2017

- Participated in data processing, documentation organizing, and customer reception.
- Conducted a research project on the status of campus loans for students at Hainan University through a combination of 109 online questionnaires and interviewed students. Analyzed the situation of campus loans.
- Provided suggestions on how to improve the business of campus loans for students in Hainan Province based on the analysis of illegal campus loan cases.

LEADERSHIP & ACTIVITIES**Director of Alumni Affairs**

05/2019 - Present

Office of Admissions and Employment (Alumni Office), Hainan University

- Liaised with and organize alumni from the department and class. Regularly update contact information of alumni.
- Assisted the Alumni Association in coordinating various activities, such as alumni back to school events.

Lecturer

12/2017

Invited by Mathematical Modeling Association, Hainan University

- Shared knowledge and methods on Matlab, including installing, programming, debugging, etc.

Director of the News Department

09/2016 - 06/2017

School of Information Science and Technology Student Union, Hainan University

- Responsible for covering events and activities of the university.
- All the news published on WeChat: sports games, famous professors interviews, and welcome parties for the freshmen, etc.
- "Excellent Journalist Station" to our news department was awarded by Hainan University in November, 2016.

Volunteer Teacher

06/2016 -07/2016

*Bijia Primary School, Danzhou, Hainan, China**Organized by Love and Care Association, Hainan University*

- Taught English to pupils in Grade 4, having 7 classes each week.
- Cooked Lunch for school every Thursday.

Member of the Web News Department

09/2015 -06/2016

Love and Care Association, Hainan University

- Reported on various charity activities of the Love Association, including event coverage, photography, and writing news articles for WeChat promotion.

Class Monitor

09/2015 - 06/2019

*Mathematics and Applied Mathematics Class 2015 (47 students)**School of Mathematics and Statistics, Hainan University*

- Planned all kinds of activities, such as knowledge contests, sports meet, and festival celebrations.
 - Tutored classmates in academic studies (research projects, programming, course designs and scholarships applications, etc.)
- Organized volunteer programs in and out of university, such as sales for charity and cares for the elderly, etc.

HONORS & AWARDS

- Employee of the Year Award, Hainan Dingyue Culture media Co., Ltd., 2020, 2021, 2022
- Summa Cum Laude Graduate for Class of 2019 of Hainan University, TOP 3%, Hainan University 06/2019
- Outstanding Undergraduate Thesis (Design), TOP 3%, Hainan University 06/2019
- **International 1st Prize** (TOP 0.88%) ,China Undergraduate Mathematical Contest in Modeling (CUMCM) 11/2017
(almost 110,000 participants from Australia, Singapore and China)
- Comprehensive Scholarship ¥ 1000 for each academic years, Hainan University 2015-2016; 2016-2017; 2017-2018
- Outstanding Leader & Outstanding Student of Hainan University 2015-2016; 2016-2017; 2017-2018
- **A total of over 100 honors** in academics, speech, leadership, contests, sports, volunteers and activities,etc. since middle school

SKILLS & SPECIALITY

- C++, Matlab, Python, R, SPSS, Lingo, MySQL, Microsoft Office
- Leadership
- Speech (Won 2nd prize in debate competition at School of Information Science and Technology, Hainan University)
- Writing
(Published more than 45 Chinese poems since 11/2011 at the website: https://www.52shici.com/collection.php?mem_id=3680
I began to make poems since 5 years old and have my own volume of poetry, over 200 poems, just for enjoyment.
(Published an article "There's a bird called Prometheus 有鸟名唤 普罗米修斯" in "Ye Cheng 椰城", Issue 9, 2011 at the website: <https://qikan.cqvip.com/Qikan/Article/Detail?id=1001814127>)
- Swimming (Usual sports for over 10 years)
- Basketball and climbing hills (favourite sports since middle school)
- Xiao (Chinese vertical flute; ever a member of school wind band in middle and high school)
- Language: Chinese Mandarin (Native), English (Fluent), Hainanese (Fluent), Japanese(Basic)

Attachment

Bachelor's Degree & Graduate Certificate from Hainan University on June 30, 2019



Bachelor's degree of authentication

| Online Verification Report of Higher Education Degree Certificate | |
|---|-------------------------------------|
| Date of Renewal: Sep. 22, 2023 Date of Expiry: Sep. 20, 2024 | |
| Name | ZHANG HONGGUANG |
| Sex | Male |
| Date of Birth | Jul. 10, 1996 |
| Degree Awarding Date | Jun. 30, 2019 |
| Degree-conferring Unit | Hainan University |
| Degree Awarded | Bachelor of Science |
| Major | Mathematics and Applied Mathematics |
| Certificate No. | 1058942019003378 |





Online Verification Code **X60ECPRADUFBDLH**

① Online authentication of the report can be made at <https://www.chsi.com.cn/xlcx/en/>

② or scan the QR code by 学信网 App.

Notes:

1. The report is subject to change. Please use the latest version of the report.
2. The report shall not be used for other purposes without the consent of its owner.
3. The online verification validity of the report is 1 year and can be extended before the report is expired by the report owner.



Verification Report

Online Verification Report of Higher Education Qualification Certificate

Date of Renewal: Oct. 10, 2023 Date of Expiry: Oct. 08, 2024

| | |
|------------------------------|-------------------------------------|
| Name | ZHANG HONGGUANG |
| Sex | Male |
| Date of Birth | Jul. 10, 1996 |
| Start Date | Sep. 07, 2015 |
| Completion Date | Jun. 30, 2019 |
| Higher Education Institution | Hainan University |
| Major | Mathematics and Applied Mathematics |
| Length of Program | 4 Years |
| Education Level | Undergraduate |
| Type of Education | Regular Higher Education |
| Form of Learning | Full Time |
| Status | Graduated |
| Certificate No. | 1058 9120 1905 0035 93 |
| President Name | LUO QINGMING |

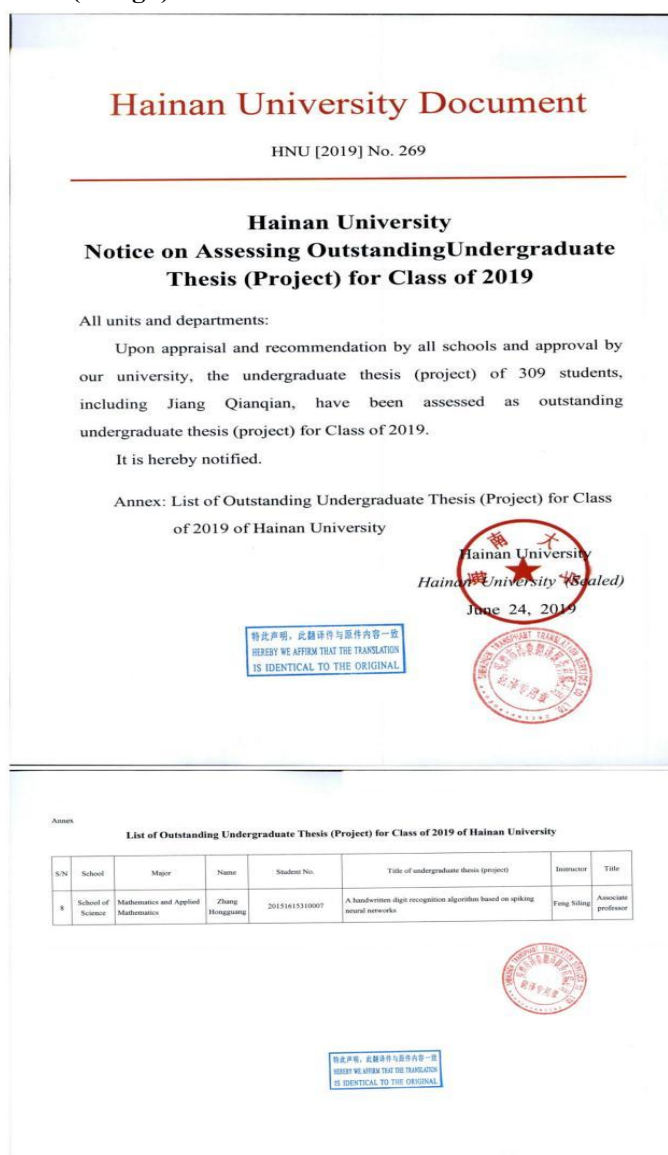
Online Verification Code **AW9BAN3FHQZJKGYN**

- ① Online authentication of the report can be made at <https://www.chsi.com.cn/xlcx/en/>
② or scan the QR code by 学信网 App.

Notes:

- For more information about "Type of Education" and "Education Level", please visit <https://www.chsi.com.cn/en/service/note.jsp>.
- This verification report is based on the re-check result of the qualification certificate electronic registration information in accordance with the *Regulation of Higher Education Student Record and Qualification Registration* (Jiaoxue [2014] 11). It should be CHSI (<https://www.chsi.com.cn>), the only MOE-designated qualification authentication website, that conducts online verification service.
- The report is subject to change. Please use the latest version of the report.
- The report shall not be used for other purposes without the consent of its owner.
- The online verification validity of the report is 1 year and can be extended before the report is expired by the report owner.



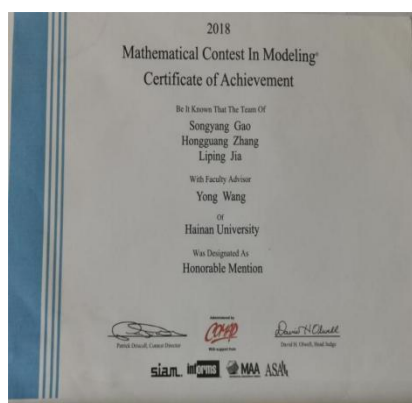
Summa Cum Laude Graduate for Class of 2019 of Hainan University**Outstanding Undergraduate Thesis (Design)**

International 1st Prize in "China Undergraduates Mathematics Contest in Modeling" (CUMCM), Top 0.88% (11/2017)



Awarded by China Society for Industrial and Applied Mathematics & China Undergraduates Mathematical Modeling Contest Committee

Prize for Mathematical Contest In Modeling



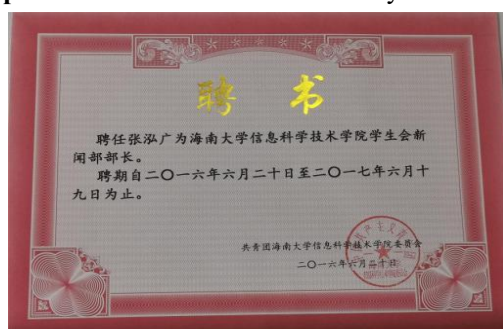
Outstanding Student of Hainan University, Top 3%



Comprehensive Scholarship ¥1000 for each academic years (2015-2016; 2016-2017; 2017-2018)



Latter of Appointment from Hainan University for Director of News Department & Alumni Affairs Director



Outstanding Leader of Hainan University (2015-2016; 2016-2017; 2017-2018)



Honors & Awards, over 100, in academics, speech, leadership, contests, sports, volunteer & activities from middle school to university



Full-time job from 08/2019 to 01/2023

海南鼎悦文化传媒有限公司

证 明

兹证明张泓广,男,护照号 EK9864817, 出生日期为 1996 年 7 月 10 日,于 2019 年 8 月 1 日至 2023 年 1 月 31 日受聘于我公司财务部,担任会计助理职位,辅助会计整理应收账款、应付账款、帮助分析数据及相关财务统计,编制月度财务报表,制定公司年度预算,定期跟踪分析预算使用情况等工作。此外,他兼任大型公益宣传片和专题片的编导助理,协助编导进行前期采访、撰写脚本、脚本监督等工作。他对工作认真负责,一丝不苟,受到一致好评。

特此证明!

负责人(签名):

海南鼎悦文化传媒有限公司(盖章)

2023 年 10 月 9 日

地址:海南省海口市龙华区椰海大道海马二横路椰海铝材不锈钢市场 C 栋 4 楼

邮编: 570216

电话: 86-15890950909

邮箱: 385552106@qq.com

Certificate

We are pleased to confirm that Hongguang Zhang, male, passport No. EK9864817, date of birth: July 10, 1996, worked in our company from August 1, 2019 to January 31, 2023. During the over three years, he worked as Assistant Accountant in Finance Department in our company to assist Accountant in sorting out accounts receivable and accounts payable, analyzing data and relating financial statistics, preparing monthly financial statements, formulating the company's annual budget and regularly tracking and analyzing the use of the budget. In addition, he served as Assistant Director of large-scale public welfare publicity films, assisting in preliminary interviewing, script writing, script supervision and other work. He was meticulous and responsible earnestly to the work, and so he received unanimous praise.

If further information needed regarding Hongguang Zhang's, we shall be please to supply additional details on request.

Yours faithfully,

Wu Xu (徐午)

Director and General Manager

Hainan Dingyue Culture Media Co., LTD. (Sealed)

Date: October 9, 2023

Address: 4 / F, Building C, Yehai Aluminum Stainless Steel Market, Haima Erheng Road, Yehai Avenue, Longhua District, Haikou City, Hainan Province, China

Postal Code: 570216

Phone: 86-15890950909

E-mail: 385552106@qq.com

Employee of the Year Award, Hainan Dingyue Culture media Co., Ltd. (2020, 2021 and 2022)



TOEFL

ETS TOEFL iBT Test Taker Score Report

Name: ZHANG, HONGGUANG
Last (Family/Surname) Name, First (Given) Name Middle Name
Email: howardzhg@163.com
Gender: Male
Date of Birth: July 10, 1996
Appointment Number: 9151 4092 3893 1426
Test Date: September 16, 2023

ZHANG, HONGGUANG
海南省海口市龙华区银湖路都市森林1号楼D单元7A
HAIKOU, Hainan 570005
China

Country of Birth: China
Native Language: Chinese
Test Center: STN80005A - GUANGDONG UNIVERSITY OF FOREIGN STUDIES
Test Center Country: China

Security Identification
ID Type: National ID
ID No.: xxxxxxxxxxxxxxxxxxxxxx1831
Issuing Country: China

THIS IS A PDF SCORE REPORT, DOWNLOADED AND PRINTED BY THE TEST TAKER.

September 16, 2023 Test Date Scores

Total Score: 102 out of 120

Reading: 28 out of 30
Listening: 29 out of 30
Speaking: 20 out of 30
Writing: 25 out of 30

MyBest® Scores
Your highest section scores from all valid test dates, as of September 19, 2023.

Sum of Highest Section Scores: 103 out of 120

Reading: 29 out of 30
Test Date: May 20, 2023
Listening: 29 out of 30
Test Date: Sep 16, 2023
Speaking: 20 out of 30
Test Date: Sep 16, 2023
Writing: 25 out of 30
Test Date: Sep 16, 2023

A total score is not reported when one or more sections have not been administered. Expired scores are not included in MyBest® calculations.

GRE

ETS GRE TEST TAKER SCORE REPORT

HONGGUANG ZHANG

Address: ROOM7A, UNIT D,BUILDING 1, DUSHISENLIN, YINHU ROAD, HAIKOU, 570206 China
Email: howardzhg@163.com
Phone: 86-13006028364
Date of Birth: July 10, 1996
Gender: Male
Intended Graduate Major: Applied Mathematics (0702)

Most Recent Test Date: October 27, 2023
Registration Number: 2402808
Print Date: November 4, 2023

Your Scores for the General Test Taken on October 27, 2023

Verbal Reasoning: Your Scaled Score: 157 (73rd Percentile)
Quantitative Reasoning: Your Scaled Score: 165 (76th Percentile)
Analytical Writing: Your Score: 3.5 (38th Percentile)