

Curriculum Vitae

Jinhu Qi

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Research Interest and Plans

For my PhD research, I focus on utilizing Large Language Models (LLMs), Chain of Thought (CoT), and Retrieval-Augmented Generation (RAG) techniques, combined with knowledge graphs and vector databases, to overcome communication barriers across different languages and cultural backgrounds. By integrating language models with knowledge graphs and vector databases, I aim to perform reasoning in a seemingly "white box" environment, thereby addressing the hallucination problem of LLMs. By reducing communication barriers caused by language and cultural differences, my research aims to promote effective communication in social media and everyday life, thereby enhancing societal communication efficiency and understanding, and fostering social harmony and progress.

Education

- **University of Southern California** Los Angeles, CA
Master of Science in Analytics Jan 2022 - Dec 2023
- **University of Oregon** Eugene, OR
Bachelor of Science in Computer and Information Science Sep 2017 - June 2021
Minor in Korean

Work Experience

- **Research Assistant**, YiSa Lab, School of Computer Science and Software Engineering, Sichuan University Jin Cheng College Advisor: Ke Wang May 2024 - Present

Research and Application of Intelligent Tourism Service System in Tibet Based on LLM:

- Developed a large-scale project in the lab focused on smart cultural tourism in Tibet, leveraging Large Language Models (LLMs).
- Conducted research on fine-tuning LLMs, using Vector-RAG and Graph-RAG techniques to optimize hallucination issues in Tibet tourism recommendation systems.
- Published two papers accepted by ICWOC 2024 and AIPR 2024:
 - Paper 1: *Research on Tibetan Tourism Viewpoints information generation system based on LLM*
 - Paper 2: *RAG-Optimized Tibetan Tourism LLMs: Enhancing Accuracy and Personalization*
- Currently writing a third paper on integrating Graph-RAG with LLMs to efficiently solve the hallucination problem in tourism recommender systems.

Research on Tibetan Tourism Viewpoints information generation system based on LLM:

- Tackled the hallucination problem in LLMs when providing recommendations for unfamiliar tourist viewpoints.
- Collected and fine-tuned LLMs with data on Tibetan tourist viewpoints, improving hotel information extraction accuracy from 0.47 to 0.98.
- Achieved an average accuracy score of 80 through comparative experiments with fine-tuning methods like SFT and ORPO.
- Fine-tuned models significantly reduced hallucinations, with results published in ICWOC 2024.

RAG-Optimized Tibetan Tourism LLMs: Enhancing Accuracy and Personalization

- Explored LLM hallucinations in tourism recommendation systems by applying Vector-RAG techniques.
- Collected data from the web, converted it into vectors using pre-trained BERT and TF-IDF models, and stored them in a FAISS vector database.
- Achieved 65% accuracy in retrieving the top three most relevant results by testing various vector retrieval methods.
- Integrated retrieved results into the LLM, improving the Llama 3 model's quality score from 0.7429 to 0.9225, with results published in AIPR 2024.

- **Research Assistant**, USC HUMANS Lab, Thomas Lord Department of Computer Science and Information Sciences Institute, Viterbi School of Engineering, University of Southern California

Advisor: Emilio Ferrara

Aug 2023 - Present

The 2024 Election Integrity Initiative:

- Developed and optimized Python scripts to collect extensive YouTube video and 4chan text data related to the 2024 U.S. election.
- Participated in monitoring social media platforms and fringe communities to track election-related content and potential misinformation.
- Executed comprehensive data cleaning processes to ensure high-quality datasets. Analyzed collected data and generated detailed reports to support research findings.
- Collaborated with the research team to provide insights and support for the Election Integrity Initiative, contributing to the observatory's mission to uphold election integrity.

Detection of Misinformation on Social Media:

- Worked with Eun Cheol Choi, Ongoing Communication PhD, on a project to detect misinformation on social media.
- Designed and implemented the code and logical framework for fine-tuning a large language model using LLaMA-Factory, tailoring it for effective misinformation detection.
- Conducted experiments and iterative improvements to achieve a 75% accuracy rate in identifying misinformation, enhancing the model's robustness.
- Evaluated the model's performance through comprehensive testing and analysis. Developed reports detailing the model's accuracy and reliability in detecting false information.

- **Data Scientist**, Machine Learning Intern, DerbySoft Ltd

Advisor: Chao Yang

June 2023 - Dec 2023

Based on ChatGPT to customize and recommend hotels that are most relevant to customers:

- Developed ChatGPT plugins, showcasing proficiency in NLP and demonstrating the potential in LLMs by optimizing OpenAI's specialized workflows, enhancing customer service query efficiency by 50%.
- Executed advanced predictive modeling and utilized A/B testing to refine ad targeting and customer engagement strategies, mirroring the methodical approach needed for empirical research in AI.
- Enhanced the company's recommendation algorithms by integrating vector databases with existing APIs, using Python to achieve an 80% accuracy in hotel recommendations, showcasing the ability to apply machine learning techniques in real-world applications.

- **Teaching Assistant**, Industrial and Systems Engineering, Viterbi School of Engineering, University of Southern California

Advisor: Carl F Kesselman & Bruce Wilcox

Aug 2022 - May 2023

DSCI/ISE 559-Introduction to Data Management & ISE535-Data Mining:

- Facilitated coursework in Data Management and Data Mining, directly relevant to managing and analyzing large datasets, a fundamental skill in LLM research.
- Led tutorial sessions in R programming and Exploratory Data Analysis (EDA), enriching students' analytical capabilities and mirroring the deep technical understanding required for LLM research.
- Managed TA teams to ensure efficient task completion, demonstrating leadership and collaborative skills vital

for multidisciplinary AI research projects.

- **Software Engineer Intern**, Hotel Development Department, Tongcheng International Travel Service Co. Ltd.

Advisor: Frank Wang

Jul 2018 - Aug 2018

Research and develop keyword hotel search through left and right entropy algorithm:

- Modified the program to optimize the hotel search system, extracted and analyzed the left and right entropy of keywords to improve the accuracy of predicting customer input keywords by 20% using Python and SQL.
- Increased the user's loyalty to the hotel's booking website by 15% and assembled the data visualization to provide support to the stakeholders to make decisions.

Publication

Jinhu Qi, Shuai Yan, Wentao Zhang, Yibo Zhang, Zirui Liu, Ke Wang, (I am the First Author), "Research on Tibetan Tourism Viewpoints information generation system based on LLM" Paper accepted by 2024 12th International Conference on Intelligent Computing and Wireless Optical Communications (ICWOC 2024) June 21-23, 2024. The patent is in an application, forthcoming in 2025. (<https://arxiv.org/abs/2407.13561>)

Jinhu Qi, Shuai Yan, Yibo Zhang, Wentao Zhang, Rong Jin, Yuwei Hu, Ke wang, (I am the First Author), "RAG-Optimized Tibetan Tourism LLMs: Enhancing Accuracy and Personalization" Paper accepted by 2024 7th International Conference on Artificial Intelligence and Pattern Recognition (AIPR 2024) September 20-22, 2024. The patent is in an application, forthcoming in 2025. (<https://arxiv.org/abs/2408.12003>)

Research Project

- **My ongoing project that will apply for a patent, forthcoming 2025:**

Enhancing Cross-Cultural Communication on Social Media through Offensive Content Detection with LLMs: *May 2024 - Present*

- Develop a system to detect and categorize culturally offensive content on social media, focusing on differences between Chinese and American cultural sensitivities.
- Utilize the BERT model to analyze and classify social media content (e.g., tweets, videos) into specific cultural offense categories. Implements tagging of content and stores results in a vector database for further analysis.
- Use a vector database to identify if new content matches existing cultural offense categories.
- Fine-tune a large language model (LLM) by SFT/ORPO/KTO with data from BERT classifications to classify new content.
- Compare the performance of methods using evaluation metrics such as BERTScore and accuracy.
- Aims to create a reliable system for identifying and mitigating culturally offensive content, enhancing cross-cultural understanding and communication on social media.

Graph-RAG: Integrating Knowledge Graphs for Improved Interpretability:

July 2024 - Present

- Continued research on combining knowledge graphs with LLMs to transform "black box" logic into "white box" interpretability. Generated knowledge graph triples for Tibetan tourist attractions using Microsoft's prompt engineering techniques.
- Developed a function-calling LLM mechanism, improving triple keyword extraction accuracy by 7% compared to fine-tuned LLMs.
- Designed two knowledge graph retrieval engines: logical chain retrieval and multi-node brute-force retrieval.
- Conducted a user survey where Graph-RAG LLM combined with logical chain retrieval achieved a 60% higher user preference than baseline LLMs. Improved LLM transparency, accuracy, and relevance, with plans to refine knowledge graph methods further.

- **Researcher for the academic article written and prepared by Eun Cheol Choi, "Dissecting Deceptive Discourse by Using Artificial Social Media Feeds via LLMs":** *Jan 2024 - Present*

- Pre-trained the Mistral-7B-v0.2 model on Hugging Face to generate naturalistic human-like social media

posts and tweets towards our goal of creating content with misinformation and toxicity.

- Collected and labeled data by identifying accurate, neutral, and misinformation or deceptive information from social media platforms, such as X and Instagram, to provide training datasets.
- Enhanced the accuracy of identifying misinformation and toxic elements by pre-training and fine-tuning the model via SFT/ORPO and evaluated the accuracy performance through recall and F1 score.
- Suggested how generative LLMs can simulate and manipulate social media feeds under varying network structures, thereby impacting the susceptibility to misinformation.
- Applied our LLMs for generating realistic social media content to prepare for high-external-validity Randomized Controlled Trials (RCTs), aiming at dissecting the role of network structures in misinformation spread.

● **Researcher for the academic article written and prepared by Eun Cheol Choi, "Fact-Checking Augmentation via Claim Matching with LLMs":** Aug 2023 - Dec 2023

- Processed and prepared datasets for LLM fine-tuning, involving extensive preprocessing of tweets posted during the COVID-19 pandemic on Twitter (X), focusing on claims related to the pandemic.
- Developed and implemented a classification system to categorize matched tweets and claims into coherent groups, distinguishing between identical, different, and ambiguous claims to support accurate information dissemination.
- Fine-tuned and evaluated LLaMA 2-7b as the optimal LLM for the enhancing fact-checking mechanisms due to its superior predictive accuracy in classifying matched claims. Achieved **75%** accuracy rate in claim matching in fine-tuned LLaMA 2.

Teaching Performance

● **University of Southern California, Viterbi School of Engineering** Los Angeles, CA

Course Name	Year	Semester	Weeks	Hours per week	Count of Students	Instructor
ISE 535 Data Mining	2022	Fall	15	20	114	Bruce Wilcox
ISE/DSCI 559 Introduction to Data Management	2023	Spring	15	20	138	Bruce Wilcox / Carl Kesselman

Qualitative comments from students:

1. Anonymous Student from ISE 535: “Jinhu Qi consistently demonstrated exceptional teaching skills by explaining complex concepts clearly and making them accessible to me. His ability to simplify difficult topics was invaluable to the class.”
2. Anonymous Student from ISE/DSCI 559: “Jinhu Qi showed outstanding dedication in supporting students. He was approachable and responsive, always willing to go the extra mile to ensure me understood the material.”
3. Anonymous Student from ISE/DSCI 559: “Jinhu Qi made a significant contribution to the course by developing useful supplemental materials and organizing effective review sessions, greatly enhancing the overall learning experience.”

Honors and Award

- **Phi Beta Kappa Honor Society, University of Oregon** 2022
- **Dean's List, University of Oregon** Winter 2020, Fall 2020, Winter 2021

Technical Skills

- **Programming Languages:** Python, LLMs Pre-training and Fine-tuning by SFT/ORPO/KTO, Vector Database, Machine Learning, Tableau, SQL, R, API Development, RAG, Graph RAG, LangChain, Neo4j with Knowledge Graph

- **Certification:** Datacamp - Data Analyst with Python, SQL, and Tableau

Referees

- **Emilio Ferrara** USC Annenberg School of Communication
Professor of Computer Science and Communication
emiliofe@usc.edu
- **Carl F Kesselman** USC Viterbi College of Engineering
Professor of Industrial and Systems Engineering, Computer Science, Population and Public Health Sciences, and Biomedical Sciences
carl@isi.edu
- **Ke Wang** Sichuan University Jin Cheng College
Head of the Department of Big Data; Vice Dean of the Institute of Artificial Intelligence and Large Model Industry
wangke@cdjcc.edu.cn

University of Oregon

Office of the Registrar 5257 University of Oregon Eugene, Oregon 97403-5257 Phone 541-346-2935

Undergraduate Transcript

Page 1

Record of: Qi, Jinhua

Print Date: 01-JUL-21

ID: 951-63-8385

Date of Birth: 01/18/XX
 High School: Sino Bright School, Jul 01, 2017
 Admit Term: Fall 2017
 Matric Term: Fall 2017
 UO Degrees: Bachelor of Science, Jun 14, 2021
 Major: Computer & Information Science
 Minor: Korean

Subject No	Course Title	Credits	Grade	Repeat
Earned Hrs: 16.00 GPA Hrs: 16.00 Quality Pts: 53.20 GPA: 3.32				
Fall 2019 Computer & Information Science Undergraduate				
BA 317	Mkt: Valu for Customer	4.00	B-	
CIS 313	Interm Data Structures	4.00	B+	
CIS 314	Computer Organization	4.00	B+	
KRN 201	2nd Yr Korean	> 1	5.00	A
Earned Hrs: 17.00 GPA Hrs: 17.00 Quality Pts: 57.20 GPA: 3.36				

Subject No Course Title Credits Grade Repeat

Fall 2017 Computer & Information Science Undergraduate				
AEIS 101	Intro Acad Oral Comm	4.00	A-	
AEIS 107	Read Academ Discourse	4.00	A-	
CIS 122	Intro Prg & Prob Solv	> 4	4.00	B
MATH 112	Elementary Functions	> 5	4.00	B
Earned Hrs: 16.00 GPA Hrs: 16.00 Quality Pts: 53.60 GPA: 3.35				

Subject No Course Title Credits Grade Repeat

Winter 2018 Computer & Information Science Undergraduate				
AEIS 102	Adv Academic Oral Comm	4.00	A-	
AEIS 111	Intermed Academic Writ	4.00	A	
CIS 199	Sp St Intro Data Sci	4.00	A	
MATH 251	Calculus I	> 4	4.00	B
Earned Hrs: 16.00 GPA Hrs: 16.00 Quality Pts: 58.80 GPA: 3.67				

Subject No Course Title Credits Grade Repeat

Spring 2018 Computer & Information Science Undergraduate				
AEIS 112	Adv Academic Writing	4.00	A	
CH 113	Chem of Sustainability	> 3	4.00	B
EC 202	Intro Econ Analy Macro	> 2	4.00	P
MATH 252	Calculus II	> 4	4.00	A
Earned Hrs: 16.00 GPA Hrs: 12.00 Quality Pts: 44.00 GPA: 3.66				

Subject No Course Title Credits Grade Repeat

Fall 2018 Computer & Information Science Undergraduate				
CIS 210	Computer Science I	> 4	4.00	B
KRN 101	1st Yr Korean	5.00	A+	
MATH 231	Elem Discrete Math I	> 4	4.00	B
WR 121	College Composition I	4.00	A-	
Earned Hrs: 17.00 GPA Hrs: 17.00 Quality Pts: 60.30 GPA: 3.54				

Subject No Course Title Credits Grade Repeat

Winter 2019 Computer & Information Science Undergraduate				
CIS 211	Computer Science II	> 4	4.00	C
KRN 102	1st Yr Korean	5.00	A+	
MATH 232	Elem Discrete Math II	> 4	4.00	B
WR 123	College Composit III	4.00	A	
Earned Hrs: 17.00 GPA Hrs: 17.00 Quality Pts: 57.50 GPA: 3.38				

Subject No Course Title Credits Grade Repeat

Spring 2019 Computer & Information Science Undergraduate				
BA 101	Intro to Business	> 2	4.00	P
CIS 212	Computer Science III	> 4	4.00	A-
KRN 103	1st Yr Korean	5.00	A+	
MATH 253	Calculus III	> 4	4.00	A-
Earned Hrs: 17.00 GPA Hrs: 13.00 Quality Pts: 51.10 GPA: 3.93 Dean's List				

Subject No Course Title Credits Grade Repeat

Summer 2019 Computer & Information Science Undergraduate				
ANTH 114	Anth Pirates & Piracy	> 2	4.00	B
ANTH 344	Oregon Archaeology	> 2	4.00	A
PHYS 201	General Physics	> 3	4.00	B+
PHYS 202	General Physics	> 3	4.00	B

(Continued on Next Column)

Subject No	Course Title	Credits	Grade	Repeat
Earned Hrs: 17.00 GPA Hrs: 17.00 Quality Pts: 62.40 GPA: 3.67				
Winter 2020 Computer & Information Science Undergraduate				
CIS 315	Intermed Algorithms	4.00	B+	
CIS 330	C/C++ and Unix	4.00	A+	
KRN 202	2nd Yr Korean	> 1	5.00	A
MATH 343	Statistic Models & Mth	> 4	4.00	B

Earned Hrs: 17.00 GPA Hrs: 17.00 Quality Pts: 54.70 GPA: 4.20
Dean's List

Subject No	Course Title	Credits	Grade	Repeat
Spring 2020 Computer & Information Science Undergraduate				
CIS 415	Operating Systems	4.00	P	
CIS 422	Software Method I	4.00	A	
KRN 203	2nd Yr Korean	> 1	5.00	A+
PHYS 203	General Physics	> 3	4.00	A+

COVID-19 disruption: remote instruction for courses; expanded pass/no pass grades.
Earned Hrs: 17.00 GPA Hrs: 13.00 Quality Pts: 32.00 GPA: 4.00
Dean's List

Subject No	Course Title	Credits	Grade	Repeat
Summer 2020 Computer & Information Science Undergraduate				
CINE 265	Hst Motion Picture I	> 1	4.00	A
MATH 307	Introduction to Proof	> 4	4.00	A

COVID-19 disruption: remote instruction for courses; expanded pass/no pass grades.
Earned Hrs: 8.00 GPA Hrs: 8.00 Quality Pts: 32.00 GPA: 4.00

Subject No	Course Title	Credits	Grade	Repeat
Fall 2020 Computer & Information Science Undergraduate				
CIS 425	Princ of Program Lang	4.00	N	G
CIS 443	User Interfaces	4.00	C+	
CIS 451	Data-Base Processing	4.00	A	
KRN 301	3rd Year Korean	> 1	5.00	A

COVID-19 disruption: remote instruction for courses; expanded pass/no pass grades.

Earned Hrs: 13.00 GPA Hrs: 13.00 Quality Pts: 45.20 GPA: 3.47

Subject No	Course Title	Credits	Grade	Repeat
Winter 2021 Computer & Information Science Undergraduate				
CIS 413	Adv Data Structures	4.00	A-	
CIS 473	Probabilistic Methd AI	4.00	A	
EALL 407	Sem Culture of Protest	4.00	B+	
KRN 302	3rd Year Korean	> 1	5.00	A+
WR 320	Scientific & Techn Wr	4.00	B+	

Earned Hrs: 21.00 GPA Hrs: 21.00 Quality Pts: 78.70 GPA: 3.74

Subject No	Course Title	Credits	Grade	Repeat
Spring 2021 Computer & Information Science Undergraduate				
CIS 425	Princ of Program Lang	4.00	A-	L
CIS 472	Machine Learning	4.00	A-	
KRN 303	3rd Year Korean	> 1	5.00	A+
KRN 309	Lang & Cul Form Korea	> 1	4.00	A-
KRN 399	Sp St Modern KRN Lit	4.00	A	

Earned Hrs: 21.00 GPA Hrs: 21.00 Quality Pts: 81.90 GPA: 3.90
Dean's List

(Continued on Page 2)

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Issued to: Jinhua Qi
jinhuaq@uoregon.edu



Julia A Pomerenck
University Registrar

University of Oregon

Office of the Registrar 5257 University of Oregon Eugene, Oregon 97403-5257 Phone 541-346-2935

Undergraduate Transcript

Page 2

Record of: Qi, Jinhua

Print Date: 01-JUL-21

ID: 951-63-8385

Subject No	Course Title	Credits	Grade	Repeat
Transcript Totals				
		<i>Earned Hrs</i>	<i>GPA Hrs</i>	<i>Points</i>
Total Institution:		229.00	217.00	790.60
Total Transfer:		0.00		3.64
Overall:		229.00		

End of Transcript



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TRANSCRIPT EXPLANATION PRINTED ON REVERSE SIDE

Issued to: Jinhua Qi
jinhuaq@uoregon.edu



Julia A. Pomerenck
Julia A Pomerenck
University Registrar

OFFICIAL TRANSCRIPTS HAVE A GREEN BORDER

Accreditation

The University of Oregon is accredited by the Northwest Commission on Colleges and Universities.

Authenticity

An official University of Oregon transcript is printed on white security paper with a green background and a dark green border. The University seal appears in the center. Facsimiles of the University Registrar's signature and the University seal are printed at the bottom or on the reverse. If the transcript is photocopied, the word "void" will appear across the face. Attempts to alter the transcript using chemical agents will cause the paper to stain brown. A thermochromic ink square appears at the bottom of the page.

Academic records for students attending Fall 1986 and after are printed in portrait format (8½" x 11" vertical). Records prior to Fall 1986 are printed in landscape format (8½" x 11" horizontal). Some records of coursework taken prior to Fall 1986 may have been converted to the portrait format.

Separate transcripts are generated for each level: undergraduate, graduate, law. Students may request a partial transcript to include only a specific level.

In accordance with the recommendations of the American Association of Collegiate Registrars and Admissions Officers, all transcripts provided directly to the student, whether official or unofficial, will be marked "Issued to Student," or have other markings to clearly inform the receiver that the transcript has been personally handled by the student.

Degrees and Credit Awarded by other Institutions

Any information displayed reflecting degrees awarded by, or transfer work accepted from, other institutions should be verified with the original institution for accuracy.

Under the provisions of Public Law 93-380, the information provided in this document is not to be released to others without the written consent of the student. The University of Oregon is an equal opportunity, affirmative action institution committed to cultural diversity.

Course Numbering System

001-099	Remedial courses which carry no credit toward a degree. Exceptions: MATH 095 and first-year foreign languages taken prior to Summer 1982.
100-299	Lower-division undergraduate credit. H designates Honors College courses.
300-399	Upper-division undergraduate credit. H designates Honors College courses.
400-499	Upper-division undergraduate credit H designates Honors College courses.
500-599	Prior to Fall 1990, courses designated G or M carry graduate credit. Graduate credit intended for graduate students; undergraduates may be enrolled in the same course when a corresponding 400-level section is being offered. Prior to Fall 1990, with designation P, professional courses suitable for graduate students holding a bachelor's degree in a field other than their graduate professional field.
600-699	Graduate credit: enrollment limited to graduate students only.
700-799	Graduate credit for graduate professional degrees only. Courses numbered 198, 199, 399, 400-410, 500-510, 600-610 and 700-710 may be repeated in successive terms under the same number, with varying credits. M designates multi-listed courses.

Student Classification

Student major and type appear with each term designation for students attending after Summer 1990.

Undergraduate (UG)	Graduate (GR)	Law (LW)	Non-Admit (NU, NG)
Freshman (0-44 credits)	Post Baccalaureate	Unclassified	Unclassified
Sophomore (45-89 credits)	Pre-Masters	First Year	Community Education
Junior (90-134 credits)	Conditional-Masters	Second Year	Pre-Baccalaureate
Senior (135+ credits)	Masters	Third Year	
Post Baccalaureate	Post-Masters	Master of Laws	
	Conditional Doctoral		
	Doctoral		
	Post-Doctoral		

Grading System

Grade	Points	Definition
A	4	Excellent
B	3	Good
C	2	Satisfactory
D	1	Inferior performance. Not used Fall 1970-Summer 1977. Law School use effective Fall 1978.
F	0	Unsatisfactory performance, no credit awarded. Not used Fall 1970-Summer 1977.
+ or -	-	Plus or minus 0.30 points, effective Fall 1990; Law School: plus 0.50 points, Fall 1990-Summer 1993.
P	-	Satisfactory: undergraduate work, C- or above; graduate work, B- or above; law work, D- or above.
N	-	Less than satisfactory performance, no credit awarded: undergraduate work, D+ or lower; graduate work, C+ or lower. Law work calculated as F (0 points) in the GPA.
AU	-	Audit, no credit awarded. Effective Fall 1990.
W	-	Officially withdrawn without penalty.
I	-	Incomplete; when the quality of work is satisfactory, but some minor yet essential requirement must be completed.
X	-	No grade reported by the instructor. Recorded by the Registrar.
Y	-	No basis for grade. Recorded by the instructor. Used through Summer 2017.

Credit

Undergraduate and graduate credits are recorded in quarter hours. Effective Fall 1973, Credit on Law-level records is recorded in semester hours. Credit earned at another institution and accepted by the University of Oregon is recorded in quarter hours.

Symbols used on the Transcript

Immediately following the grade:

*	Course offered P/N only. Restriction set by Curriculum Committee or academic department.
#	Following grade of N, course taken P/N. Used Fall 1970-Summer 1977.
D or E	Repetition, or remedial course carrying no credit. Excluded from term and cumulative GPA. +
G	Repeated course, excluded from cumulative GPA only. Effective Fall 2016. +
L	Repeated course, included in term and cumulative GPA. Effective Fall 2016. +
M	Regression, included in term and cumulative GPA. Effective through Summer 2016, also used to indicate repetition. +
R	Reserved for graduate credit. Effective through Summer 1990.

+ Credit is awarded only once for non-repeatable courses, and is not awarded for regression or coursework taken beyond catalog limitations. GPA exclusions apply only to graded (A-F) courses.

Immediately following the course title:

>1	Approved for Arts & Letters group. (Undergraduate degree requirement effective Fall 1982.)
>2	Approved for Social Science group. (Undergraduate degree requirement effective Fall 1982.)
>3	Approved for Science group. (Undergraduate degree requirement effective Fall 1982.)
>4	Approved for Science group and Math requirement. (Undergraduate degree requirement effective Fall 1983.)
>5	Approved for Math requirement. (Undergraduate degree requirement effective Fall 1983.)

Totals

Definitions: Ehrs, Earned hours; GPA-hrs, credits used in GPA calculation; Pts, quality points.
Academic Standing is indicated either in the comments section or as a notation following the term totals line.

Grade Point Average

The University of Oregon reinstated the GPA Fall 1990. No GPA is calculated for students last enrolled prior to Fall 1990.
The GPA is determined by dividing the total points by total GPA hours. Only UO work is used in calculating the GPA.

UNIVERSITY OF SOUTHERN CALIFORNIA
OFFICIAL ACADEMIC TRANSCRIPT

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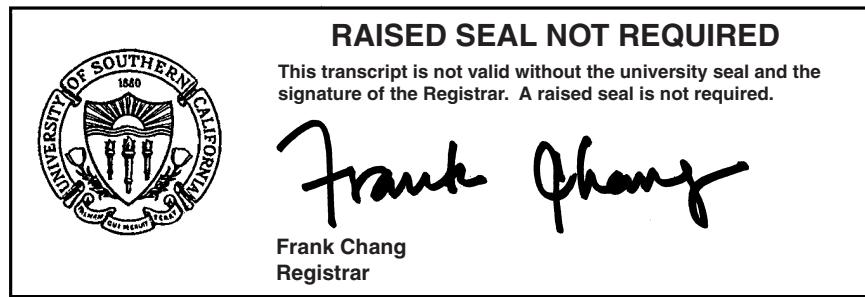
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STUDENT NAME	STUDENT NUMBER	DATE	PAGE
Qi, Jinhua	3084-6982-01	12-15-2023	1 of 2

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ISSUE TO:

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Current Program of Study

USC Degrees Awarded

12/13/2023 Master of Science

Analytics

USC Cumulative Totals

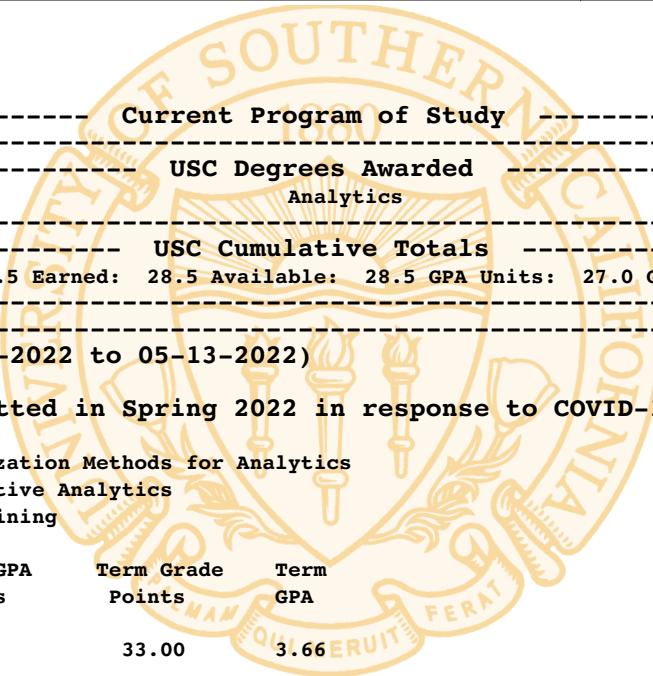
Graduate Units Attempted: 28.5 Earned: 28.5 Available: 28.5 GPA Units: 27.0 Grade Points: 98.10 GPA: 3.63

Spring Semester 2022 (01-10-2022 to 05-13-2022)

Grades of Pass/No Pass permitted in Spring 2022 in response to COVID-19 global pandemic.

ISE-530 B 3.0 Optimization Methods for Analytics
ISE-529 A 3.0 Predictive Analytics
ISE-535 A 3.0 Data Mining

Term Units Attempted	Term Units Earned	Term GPA Units	Term Grade Points	Term GPA
9.0	9.0	9.0	33.00	3.66



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Qi, Jinhua	3084-6982-01	12-15-2023	2 of 2

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Fall Semester 2022 (08-22-2022 to 12-14-2022)

ISE-562 B+ 3.0 Decision Analysis
ISE-533 A- 3.0 Integrative Analytics
DSCI-559 A- 3.0 Introduction to Data Management

Term Units Attempted	Term Units Earned	Term GPA Units	Term Grade Points	Term GPA
9.0	9.0	9.0	32.10	3.56

Spring Semester 2023 (01-09-2023 to 05-12-2023)

ISE-583 B 3.0 Enterprise Wide Information Systems
ISE-580 A 3.0 Performance Analysis with Simulation
ISE-543 A 3.0 Enterprise Business Intelligence and Systems Analytics

Term Units Attempted	Term Units Earned	Term GPA Units	Term Grade Points	Term GPA
9.0	9.0	9.0	33.00	3.66

Summer Semester 2023 (05-17-2023 to 08-08-2023)

ENGR-597x CR 0.5 Internship in Engineering with Professional Writing and Communication

Term Units Attempted	Term Units Earned	Term GPA Units	Term Grade Points	Term GPA
0.5	0.5	0	0	0.00

Fall Semester 2023 (08-21-2023 to 12-13-2023)

ENGR-598 CR 0.0 Professional Internship Experiences
ISE-651 CR 1.0 Seminar in Industrial & Systems Engineering

Term Units Attempted	Term Units Earned	Term GPA Units	Term Grade Points	Term GPA
1.0	1.0	0	0	0.00

End of Transcript

ACADEMIC TRANSCRIPT INFORMATION

NOTE: The information that follows represents current University policies. Questions regarding historical University policies and/or transcript notations should be addressed to the Office of the Registrar. This document contains a number of security features. Further information or authentication can be obtained by calling the Office of the Registrar (213) 740-9230.

COURSE CREDIT/UNIT VALUE

A semester unit is a credit of one hour per week for one semester (15 weeks in length).

COURSE NUMBERING AND CLASSIFICATION

The first digit of the course indicates the year level of the course. 000-preparatory courses; 100-first undergraduate year; 200-second undergraduate year; 300-third and fourth undergraduate years without graduate credit; 400-third and fourth undergraduate years with graduate credit for graduate students; 500-first graduate year; 600-second graduate year; and 700-third graduate year.

GRADING SYSTEM

The following grades are used: A, excellent; B, good; C, fair in undergraduate courses and minimum passing in courses for graduate credit. D, minimum passing in undergraduate courses; and F, failed. Additional grades include CR, credit; NC, no credit; P, pass; and NP, no pass. The following marks are also used: W, withdrawn; IP, in progress; UW, unofficial withdrawal; MG, missing grade; IN, incomplete; and IX, lapsed incomplete.

GRADE POINT AVERAGE (GPA) CATEGORIES/CLASS LEVEL

A system of grade points is used to determine a student's grade point average. Grade points are assigned to grades as follows for each unit in the credit value of a course. A, 4.0 points; A-, 3.7 points; B+, 3.3 points; B, 3.0 points; B-, 2.7 points; C+, 2.3 points; C, 2.0 points; C-, 1.7 points; D+, 1.3 points; D, 1.0 points; D-, 0.7 points; F, 0 points; UW, 0 points; and IX, 0 points. Marks of CR, NC, P, NP, W, IP, MG and IN do not affect a student's grade point average. There are four categories of class level and GPA: Undergraduate, Graduate, Law, and Other. UNDERGRADUATE is comprised of Freshman (less than 32 units earned), Sophomore (32 to 63.9 units earned), Junior (64 to 95.9 units earned) and Senior (at least 96 units earned). GRADUATE is comprised of any coursework attempted while pursuing a master's and/or doctoral degree. LAW is comprised of any coursework attempted while pursuing a Juris Doctor or Master of Laws degree. Other is comprised of any coursework attempted while not admitted to a degree program or coursework not available for degree credit.

CLASS RANK

The University of Southern California does not calculate or support a class rank for its undergraduate students. While most graduate programs do not rank students, requests for graduate student class rankings should be directed to the dean of the particular school in which the graduate degree was earned.

STUDENT GOOD STANDING

A student is considered to be in good standing if they are eligible to register for classes. Disciplinary good standing is determined by the Office of Community Expectations.

TRANSFER CREDIT

Coursework accepted from other institutions is summarized into undergraduate and graduate areas. The summary information includes the number of units and GPA. The transfer institution(s) and dates of attendance do not appear on the USC transcript.

GOULD SCHOOL OF LAW GRADING SYSTEMS

Beginning in Fall 2022, courses are graded numerically from 4.0 to 1.9, with letter-grade equivalents ranging from A to F. The grade equivalents are 4.0 to 3.8 (A); 3.7 to 3.5 (A-); 3.4 to 3.3 (B+); 3.2 to 3.0 (B); 2.9 to 2.7 (B-); 2.6 to 2.5 (C+); 2.4 (C); 2.3 to 2.1 (C-); 2.0 (D); and 1.9 (F).

From Fall 2012 through Spring 2022, courses were graded numerically from 4.4 to 1.9, with letter grade equivalents ranging from A+ to F. The grade equivalents are 4.4 to 4.1 (A+); 4.0 to 3.8 (A); 3.7 to 3.5 (A-); 3.4 to 3.3 (B+); 3.2 to 3.0 (B); 2.9 to 2.7 (B-); 2.6 to 2.5 (C+); 2.4 (C); 2.3 to 2.1 (C-); 2.0 (D); and 1.9 (F).

From Fall 2001 through Spring 2012, courses were graded numerically from 4.4 to 1.9, with letter grade equivalents ranging from A+ to F. The grade equivalents are 4.4 to 4.1 (A+); 4.0 to 3.8 (A); 3.7 to 3.5 (A-); 3.4 to 3.3 (B+); 3.2 to 3.0 (B); 2.9 to 2.7 (B-); 2.6 to 2.5 (C+); 2.4 (C); 2.3 to 2.0 (D); and 1.9 (F).

Prior to Fall 2001, the grading system consisted in numbers in a range from 90 to 65. A grade of 90 was equivalent to highest honors and was very rare; 89 to 85 high honors; 84 to 80, honors; 79 to 70, satisfactory; 69 to 66, unsatisfactory; and 65, failing.

OSTROW SCHOOL OF DENTISTRY GRADING SYSTEM

Students admitted to the Doctor of Dental Surgery program in Fall 1990 or later and students admitted to the International Student Program in Summer 1991 or later, are bound by the University's grading system (excluding plus/minus grades), which is detailed *above* under the heading "GRADING SYSTEM." Academic records for dentistry students who attended prior to the dates listed above are housed independent of the University's central record system. Contact the Ostrow School of Dentistry directly for this earlier academic record information.

KECK SCHOOL OF MEDICINE TRANSCRIPTS

Transcripts for medical students are housed independent of the University's central records system. Contact the School of Medicine directly for this academic record information.

LANGUAGE OF INSTRUCTION

English is the language of instruction at USC. All courses are taught in English with the exception of a few advanced language courses.

ACCREDITATION

The University of Southern California is fully accredited by the Western Association of Schools and Colleges. For additional professional accreditation information, please refer to the latest issue of Accredited Institutions of Postsecondary Education published by the American Council on Postsecondary Accreditation (COPA).

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