

Enming GUO

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EDUCATION

University of California, San Diego <i>M.S. Computer Science</i>	2023/09–2025 La Jolla, CA
University of California, Irvine <i>B.E.&M.E. Computer Engineering (Exchange Student for 3+2 Joint Training Program)</i>	2022/08–2023/06 Irvine, CA
<ul style="list-style-type: none">• GPA: 3.97/4.0• Courses: Principles of Data Management, Beyond SQL Data Management, Machine Vision.• Specializations: Database Management System, Computer Vision (UCI Computer Vision Laboratory).	
Northeastern University (CN) <i>B.Eng. Computer Science & Technology</i>	2019/09–2023/06 Shenyang, China
<ul style="list-style-type: none">• GPA: 4.435/5.0 Ranking: No.1/221 (GPA:3.99/4.0 Certified by WES (World Education Services))• Courses: Computer Architecture, Database Principle, Operating System, Distributed Programming, Big Data Algorithm, Data Science Foundations, Data Structures, 7 mathematics courses (83 courses in total).• Specializations: Management and Analysis of Big Graph, Graph Neural Network.	

EXPERIENCE

Research work <i>Computer Vision Laboratory at UC Irvine</i>	2022/09–2023/06 Irvine, CA
<ul style="list-style-type: none">• Researched “Spectral Image Filtering” and “Model of Spinning Ball under Complex Forces” under <u>Prof. Glenn Healey</u>.• Used large sets of sensor data to model the diverse and complex forces on the spinning baseball.• Led the lab in analyzing Hyperspectral Data Cubes and determined main bands in SWIR and NWIR spectra.	
Industrial Big Data Intern <i>Neusoft Corporation</i>	2022/05–2022/08 Shenyang, China
<ul style="list-style-type: none">• Applied Industrial Toolsets to develop a Movie Recommendation and Information Visualization Platform.• Utilized SpringBoot framework to finish the website and combined Spark, Scala, and Hadoop to implement distributed data analysis.	
Winter-Camp Academic Project <i>University of Cambridge</i>	2022/01–2022/02 Romote / Cambridge, UK
<ul style="list-style-type: none">• Researched “Automatic License Plate Recognition Based on Different Kinds of Images” under <u>Full Prof. Pietro Liò</u>.• Used Yolov5 and CNN + Bi-GRU model to finish the ROI capture and character recognition.• Completed the whole License Plate Recognition System and comparison with existing results in this field.	
Research work <i>Brain Science and Big Data Analysis Lab at Northeastern University (CN)</i>	2020/09–2022/05 Shenyang, China
<ul style="list-style-type: none">• Researched methods to apply dynamic brain networks in Aided Alzheimer’s Diagnosis under Prof. Junchang Xin.• Designed algorithms on mining sequential discriminative subgraph and constructing evolving graph neural network.• Published a paper and three computer software copyright registration certificates.	
ACM/ICPC Intensive Training Team Member <i>ACM/ICPC Intensive Training Team at Northeastern University (CN)</i>	2020/01–2021/10 Shenyang, China
<ul style="list-style-type: none">• Learned many traditional/advanced algorithms and data structures via training courses and competitions.• Led a team to participate in ICPC contests and won prizes in ICPC Asia Regional Contest.	

PROJECTS

<u>Aided Alzheimer’s Diagnosis System</u> / <i>Python, MATLAB, Pytorch, ttkbootstrap</i>	2023/03–2023/06
<ul style="list-style-type: none">• Designed Aided Alzheimer’s Diagnosis System based on evolving graph neural network.• Utilized DPARSF toolkit to finish preprocessing on fMRIs from ADNI and Matlab to construct dynamic brain network.• Constructed evolving graph convolutional network and E-GCN models as classification via Pytorch geometric libs.• Utilized ttkbootstrap libs as frontend design and Django frame as backend design.• Completed my bachelor’s degree graduation thesis (in English) “Design and Implementation of Aided Diagnosis System of Alzheimer’s Disease Based on Evolving Graph Neural Network”.	

Database Management System | C++

2023/01–2023/03

- Designed the database hierarchical structure, including index management layer and query engine.
- Completed the B+ tree coding and saved positioning time via node merging, separation, and rotation.
- Utilized multiple methods to implement operators, such diverse JOIN algorithms (BNLJ, INLJ, GHJ).

Imitative Linux File System / C++

2022/05–2022/06

- Designed disk external storage, partitioned disk blocks, designed file storage mode, and used Group Link algorithm to allocate free disk blocks.
- Developed comprehensive function points, including cascade create, cascade delete, copy, cut, soft link and hard link.
- Implemented the interaction based on imitative Linux query language and the parsing process of complex query functions.

SKILLS

Programming languages: Python, Java, C, C++, MATLAB, MySQL, HTML/CSS/JavaScript, VHDL

Developer tools: git, SSH, Linux, VS Code, Visual Studio, PyCharm, Eclipse

Skills: SpringBoot, Maven, ElasticSearch, Hadoop, Docker, Scala, Spark, MongoDB, Neo4j, Django

AWARDS

Scholarships

- **Baosteel Outstanding-Student Award** (with scholarship) for 2022 (**Top 0.02%**, National-wide)
- **National Scholarship**, twice for 2020/2021 (Top 1.8%, National-wide)
- First-Prize Scholarship of Northeastern University, Triple for 2020/2021/2022 (Top 4%, University-wide).

Honors

- Honorary title of "**Outstanding Graduates of Liaoning Province**" in 2023 (Provincial-wide)
- **National Excellent**, the project funded by "National Innovation and Entrepreneurship Training Plan for College Students" in 2022 (The highest evaluation for project accomplishment, I was the leader of the project team)
- Honorary title of "Outstanding College Students of Shenyang City" in 2022
- Excellent Model Student of Northeastern University, Triple for 2020/2021/2022 (Top 1.4%, University-wide).

Competitions

- **Outstanding Winner:** The 15th Challenge Cup Liaoning Collegiate Extracurricular Academic and Technological Works Competition.
- **Gold Award:** The 7th Liaoning "Internet +" Collegiate Innovation and Entrepreneurship Competition.
- **First Prize:** 2021 China Undergraduate Mathematical Contest in Modeling (Liaoning Region).
- **Third Prize:** 2021 Group Programming Ladder Tournament of China Collegiate Computer Competition (Finals).

PUBLICATIONS

Papers

- Xin JC (tutor), **Guo Enming**, Zhang JZ. Auxiliary diagnosis method of Alzheimer's disease based on sequential discriminative subgraph[J]. Journal of Northeastern University (Natural Science), 2022,43(8): 1089-1096
- Li JY, Tang JF, **Guo Enming**. Crowd emergency evacuation model based on dynamic emotion Drive[J]. Journal of Northeastern University (Natural Science), 2021,42(11):1656-1662
- Cui MH, Zhang RB, **Guo Enming**. Future business forecasting based on multi-mode feature aggregation[J]. Computer Systems & Applications, 2023, 32(2): 25-33.

Computer software copyright registration certificates

- **Guo Enming**, Zhang JZ, Qiu PH, et al. Auxiliary diagnosis system of Alzheimer's disease based on multifrequency fusion image kernel. Computer Software Copyright (China), No.2022SR0252304, Authorized date: 2022.02.21
- **Guo Enming**, Zhang JZ, Qiu PH, et al. Searching system of sequential discriminative subgraph of dynamic brain function network. Computer Software Copyright (China), No.2022SR0078905, Authorized date: 2022.01.12
- Zhang JZ, **Guo Enming**, Qiu PH, et al. Auxiliary diagnosis of Alzheimer's disease based on dynamic brain network. Computer Software Copyright (China), No.2022SR0190037, Authorized date: 2022.01.29

OTHERS

- **English ability:** GRE 334 (+4.5) (in Oct 2022), TOEFL 111 (in Nov 2022)
- **Personality:** Diligent, Good at organization and communication.
- Served as the Class leader in Charge of Study in 2019-2022.
- As the team leader of Dance Troupe of our School in 2020-2022, organized and participated in many performances.
- Engaged as a Lecturer in the Innovation and Entrepreneurship Promotion Group of the University in 2022.
- Won the First Prize in the 12·9 Long-Distance Running at the University in 2021.