

EDUCATION EXPERIENCE

Guangdong Ocean University

09/2022-06/2026

- **Degree:** Bachelor of Engineering in Information Management and Information System **GPA:** 89.4/100
- **Courses:** *Management for Information Resources, Web Development Technology, C Language Programming, Multivariable Statistics, Method and Application of Business Intelligence, Principles of Economics, etc.*

PUBLICATION AND COPYRIGHT

Article - Yujing Zhao, Shipeng Xu, Xiaoben Zheng, Lisha Luo, Boyan Xu, Chunru Xiong. Enhanced Real-Time Simulation of ROV Attitude and Trajectory Under Ocean Current and Wake Disturbances. *Applied System Innovation*. 2025; 8(3): 75. <https://doi.org/10.3390/asi8030075> 05/2025

Software Copyright - A Detection System for the Segmentation of Lung Parenchyma and the Recognition of Pulmonary Nodule Based on Threshold Binarization and Yolov5, Reference Number: 2024SR1952424 12/2024

Software Copyright - Intelligent Diagnosis System for Pulmonary Nodule Based on Deep Learning Technology V1.0, Reference Number: 2024SR1928372 11/2024

EI Conference Article - Shipeng Xu, Zishen Huang, Tzu-Ying Cheng, Zhehao Li. SPD-YOLOv7: A New Method for Corn Pest Detection [C]/2024 IEEE 4th International Conference on Electronic Technology, Communication and Information. Changchun, China: IEEE, 2024: 1345-1348. 07/2024

RESEARCH EXPERIENCE

Sentiment Analysis of Brain-computer Interface

05/2025-Present

- Collect, process and analyze brain-computer data for the recognition and classification of sentiments
- Extract characteristics of the time domain, frequency domain and time-frequency domain, establish and train the model through machine learning and deep learning plagiarism
- Engage in the back-end deployment of a brain-controlled car and the exploration of brain-computer interface applications in virtual reality

Application of Underwater Robots

06/2024-03/2025

- Acted as a core member to explore underwater image recognition & enhancement, intelligent route planning & attitude control of unmanned underwater robots and other functions in combination with geomagnetic navigation and applied the robots in underwater tasks including fishery, underwater cleaning and underwater inspection & repair
- Designed and executed simulation tests of ocean currents to explore the effect of ocean currents on the route of unmanned underwater robots
- Engaged in the deployment of servers and assisted in the development and optimization of underwater image recognition & enhancement model
- Applied a patent for invention - A Vehicle Collision Avoidance Strategic Method for Intersections with No Traffic Lights Based on Differential Game Theory

Achievement: Won the Campus Bronze Award in the China International College Students' Innovation Competition 2024 and the 1st Prize in the Cross-Strait and Hong Kong-Macao College Student Computer Innovation Competition; Approved to be listed in the National Undergraduate Training Program for Innovation and Entrepreneurship

Research on the Potential of Photovoltaic Power Generation Based on NSGA-II Optimization under the Dual Carbon Goals

04/2024/04/2025

- Collected massive data on photovoltaic power generation in Guangdong from 2017 to 2023 to identify key indicators
- Applied the partial least squares regression method to create a model for analyzing factors that affect photovoltaic power generation
- Set up constraints of power generation capacity, built functions for generation capacity and revenues, constructed a NSGA-II optimization model and pooled the maximum potential capacity
- Discussed the feasibility of photovoltaic power construction through modelling of Random Forest and Logistic Regression

Achievement: Won the 2nd Prize in the National College Student Statistic Modeling Competition and the Provincial 2nd Prize in the National University Student Energy Economy Academic Creativity Competition

Intelligent Diagnosis System for Pulmonary Nodules Based on Deep Learning Technology

12/2023-05/2024

- Led team members to interdisciplinary research on developing an intelligent diagnosis system of pulmonary nodules with functions of automatic identification, multiport service and data management and exploring the access to market
- Utilized LUNA16 database for data collection & pre-processing, applied strategies of deep learning, cross-validation and transfer learning to optimize the YOLOv5 model

- Adopted separate development methods and diverse frameworks to design the front-end and back-end interfaces, carried out technological assessment and user tests to attest to the validity and practicality of the system
- Proposed a complete and profitable business plan and conducted promotion activities for cooperation with medical institutions

Achievement: Won the Municipal 1st Prize in the 10th National Youth Science Communication Contest for Innovative Experiments & Works and the 3rd Prize in the Cross-Strait and Hong Kong-Macao College Student Computer Innovation Competition

Igniting the Future - New-generation Solid Oxide Fuel Cell Based on Composite Materials 12/2023-04/2024

- Focused on SOFC Research & Development, Innovation and commercial operation to accelerate the development of the new energy industry and global sustainable development
- Conducted market surveys to collect data on the relevant markets, industries and competitors and analyzed the microscopic environment, current situation & trends of domestic and international markets and the competitiveness of the products
- Established and executed a business plan with effective marketing and management and maintained close communication with industrial leaders

Achievement: Won the Campus 2nd Prize in the China International College Students’ Innovation Competition 2024 and the Bronze Award in the 2nd Guangdong Ocean University College Student Innovation and Entrepreneurship Competition

EXTRACURRICULAR ACTIVITIES

Member, GDOU TIPDM Intelligence Studio (School-Enterprise Cooperation) 10/2024-Present

- Participate in the practice projects Price Prediction of New and Used Vehicles, Data Analysis of Commodity Operation in the Supply Chain and Sentiment Analysis of E-commerce Comments Based on NLP
- Carry out collection, cleansing, modelling and visualization during big data exploration and delve into the enhancement of data quality through the flexible and innovative application of data processing tools

Achievement: Obtained the honourable title of “Excellent Student”

Office Head, Youth League Committee of Guangdong Ocean University 10/2024-Present

- Revise the institution of the Committee to optimize the internal management and external cooperation
- Execute the decisions and instructions of the university and command subordinate departments to complete tasks
- Organize university-level major activities in accordance with the development demands of the university and students
- Manage and train office members to improve the services of the office, assess departments of the committee to enhance the operation of the committee

Achievement: Obtained a mark of “Excellence” in individual assessment for two years and steered the office to win the honourable title of “Excellent Department”

Co-founder, Yangjiang Branch of GDOU HaiLang BBS 11/2022-Present

- Set up a collaborative organization construction and formulate management & operation systems
- Plan and organize campus promotion projects and student activities to enhance the reputation of GDOU
- Operate the WeChat official account of the Yangjiang Campus and supervise the production of news reporting materials like photography and press releases from the organization
- Conduct personnel recruitment, training and management to promote organizational development

Achievement: Obtained the award of the honoured title “Top 10 Campus Media of Guangdong Province”

AWARDS AND PRIZES

05/2025	Honorable Mention, Mathematical Contest in Modeling (MCM)
01/2025 & 10/2023	Merit Student (Twice), Guangdong Ocean University
01/2025 & 10/2023	Excellent Second-class Scholarship (Twice), Guangdong Ocean University
12/2024	Second Prize, Guangdong Contemporary Undergraduate Mathematical Contest in Modeling
12/2024	Third Prize, 10 th China Undergraduate Physics Experiment Competition (CUPEC)
08/2024	Third Prize, “Huashu Cup” National College Student Mathematical Contest in Modeling
02/2024	Outstanding (Top 5%), “Huashu Cup” International Mathematical Contest in Modeling
01/2024	First Prize, Asia and Pacific Mathematical Contest in Modeling (APMCM)
12/2023	Second Prize, MathorCup University Mathematical Modeling Challenge

ADDITIONAL SKILLS & INTERESTS

- **Computer skills:** Microsoft Office Suite, Programming
- **Certificates:** NCRE (Level-2), CET-6, CET-4, IITC, PSC (Level-2, Grade B)
- **Languages:** Cantonese (native), Mandarin (native), English (proficient)
- **Interests:** Photography(VCG Contract Photographer), Guitar, Video-making, Traveling