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EDUCATION

Zhejiang University **09/2019 – 06/2024**
Bachelor of Science in Engineering (BSE) in Opto-Electronics Information Science and Engineering
GPA: 3.92/4.0 (Ranking: Top 15%)
Courses:
Probability Theory and Mathematical Statistics, Signal and Processing, Machine Vision and Image Processing, Embedded Systems and Applications etc.

ENTREPRENEURSHIP EXPERIENCE

Gstarcad Internet **Hangzhou, China**
Role: CEO (The Establishment, Maintenance, and Operation of the Platform) **07/2022 – 07/2023**

- Proposed the idea of building a virtual talent pool in the forms including Web pages, mini-program, APP, etc. to alleviate the problems in hometown, such as outsourcing programs and education resource integration
- Developed a team with members from top universities in China and established the company Gstarcad Internet
- Engaged in Web development and WeChat operations and initiated the project of *Call You Back SEIFO*
- Coordinated teammates in Web development and organized various thematic activities such as Chinese Valentine's Day—Couple Matchmaking that connected the Internet and traditional cultures

INTERNSHIP

Sunny Optical Technology Group **Hangzhou, China**
Role: PA Engineer **06/2022-07/2022**

- Explored and studied the test principles of inverse optical path device, car lens and HUD system, and principle of tolerance and yield analysis
- Acquired the use of ZEMAX and AutoCAD and applied them to optical practice and designed a simplified camera optical imaging system
- Tested the parameters and performance index of multiple imaging lens and produced analytical reports

PROJECT RESEARCH

Graduation Project and Thesis **08/2023 – 06/2024**
Topic: Research on static and dynamic grasping of robots for warehousing and logistics applications

- Constructed a geometric grasping module for grasp generation. This article refers to the GSNet model architecture, using graspness to measure points in the point cloud suitable for grasping and extracting local and global high-dimensional point cloud features. Then, it extracts point-wise grasping degrees and subsequent viewpoint-wise grasping degrees, sets a graspness threshold to filter target point clouds, and generates grasps based on the filtered target point clouds, achieving static grasp generation.
- Built a dynamic tracking module based on time-based graspness. This article refers to AnyGrasp, using multi-threaded high-dimensional feature vectors to represent each grasp in each frame, calculating cosine similarity to measure the similarity between high-dimensional feature vectors, and using this to measure the correspondence of temporal dimensions between grasps in frames, achieving continuous generation of dynamic tracking poses.
- Established a robot motion control and path planning system. This article, based on ROS (Robot Operating System), utilizes ROS's distributed communication architecture to connect and communicate between nodes. Motion control and path planning mainly use MoveIt API to write robot control modes and path planning, achieving multidimensional control of the robotic arm system.
- Designed static and dynamic experiments for robot new object grasping. Static experiments include parcel grasping experiments and daily necessities grasping experiments to verify the generalization ability of the constructed robot new object grasping system. Dynamic experiments involve grasping parcels moving on conveyor belts to verify their dynamic grasping capability. Through experimental verification, this article

demonstrates that the robot learning-based unknown object grasping system constructed in this article exhibits good performance in both static and dynamic object grasping scenarios.

Microstructure Fiber Array Single Virus Sensing System Based on Microimaging **03/2022 – 07/2022**
Leader of the Establishment of Single Molecule Fluorescence Microscope and Enumeration APP (Research Group)

- Produced a microimaging-based single virus sensing system that 1) used pores inherent in the porous microstructure fiber as the array for sample circulation 2) processed advanced microimaging like hyper-spectrum and enumeration on each pore on optical fiber face 3) measured the trace virus of ultra-low abundance to realize hypersensitivity and specificity 4) adjusted pore size and cycle to enhance flux detection
- Built a portable fluorescence microscope to replace the fixed lab-used large microscope, developed a simple and portable system for the lab bulky dPCR instrument, completed the enumeration programming for mobile APP and MATLAB
- Accomplished detection & analysis integrated operations by constructing a relatively cheap optical microscope and mobile APP, selected and used LED light sources with shorter wavelengths or narrower bandwidths on future experiments (with utility model patent and invention patent in progress)

Student Research Training Program (SRTP) **03/2021 – 04/2022**
Topic: UVA Airborne Laser Radar Sounding Technology | Role: Mathematical Modeling and Simulation Leader

- Conducted complete simulation and reflection on scanning process of current airborne simulators including Shoals System, Wa-LiD simulator, etc. from the aspects of inertial navigation, GPS, precision, etc.
- Analyzed the sounding efficiency of the single signal of simulators and explored the noise analysis during scanning
- Applied MATLAB to develop the mathematical simulation model and completed the conceptual airborne laser radar through SolidWorks; simulated real situations of the scanning by embodying the functions including rotation, scanning, inversion, etc.

ACTIVITIES

Director of Academic Division, **Student Union, ZJU College of Optical Science and Engineering 10/2021- 6/ 2022**

- Led teams to make surveys on the needs of students and planned corresponding academic events ranging from seminars and contests to lectures to enrich their knowledge system
- Collaborated with other divisions and organizations to schedule academic and technology festivals to improve the intellectual atmosphere
- Launched experience exchange on the study of different courses and invited model students to share their methods and experience and bridge the communication between students and professors

Member, **Network Publicity Department, Film Society of Zhejiang University** **10/2019 - 06/2020**

- Followed up latest movies online and cooperated with teammates to organize significant movie-watching and applied social media platforms to attract more audience and expand the influence of activities

Volunteer, **The Second Affiliated Hospital Zhejiang University School of Medicine** **10/2021**

SKILLS AND OTHERS

Interested Area: **Robotics or related fields**
Computer Skills: Python, C, VSCode, Ubuntu, ROS, OpenCV, Open3D, Pytorch(deep learning), MATLAB, Zemax, Github, etc.
Interests: Swimming, Cycling, Football, Reading