Jin Yan

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EDUCATION

Huazhong University of Science and Technology Wuhan, China
B.E. in Opto-electronic Information Science and Engineering June 2024 (expected)
GPA 3.66/4
TOFEL: 99

RESEARCH EXPERIENCE

Huazhong University of Science and Technology Wuhan, China
Metalens-based Optical Multiparameter Detection
Research Assistant in Prof. Zhenyu Yang's Group September 2022 – January 2023

- **Description:** Designed metalens to reconstruct the Stokes parametrization of light based on PB phase modulation, Hartmann-shack wavefront detection principle. The incident light intensity was detected by 4~6 different polarization-sensitive lenses to reconstruct the Stokes parameter of the incident light.
- **Tools:** Lumerical FDTD solutions, MATLAB, Python.
- **Accomplishments:** Completed a research presentation

Huazhong University of Science and Technology Wuhan, China
Metalens-based Rotating Zoom Lens Set
Research Assistant in Prof. Zhenyu Yang's Group March 2023 – Present

- **Description:** Explored the rotation zoom rule of a single metalens array, simulated and fabricated one rotating zoom optical system. Then I designed a 3-lens optical system with fixed focal plane, completed its simulation and experiment.
- **Tools:** MATLAB
- **Accomplishments:** manuscript in preparation

University of California, San Diego Remote
Drug-Interaction Prediction based on Chain-of-Thought Prompting in GPT3.5
Research Assistant in Prof. Pengtao Xie's Group May 2023 – Present

- **Description:** In this project, I designed a series of logical steps named Chain-of-Thought (CoT) for the GPT intended for drug-drug interaction (DDI) prediction. By fine-tuning GPT3.5, I increased the accuracy of GPT's prediction on DDIs.
- **Tools:** Python
- **Accomplishments:** manuscript in preparation

PUBLICATIONS

➢ Z. Duan*, H. Wu*, Y. Luo* and **J. Yan***, "Research on the Best Riding Strategy," 2022 IEEE Conference on Telecommunications, Optics and Computer Science (TOCS), Dalian, China, 2022, pp. 1053-1058, doi: 10.1109/TOCS56154.2022.10016007.

PROJECTS

Assembly Language Programming February 2022 – July 2022

- Used Keil to program the 8051 microcontroller, enabling the microcontroller to count, display names, and play music.

3D Model Design & Printing September 2022 – November 2022

- Designed a model of the school's history gallery using FreeCAD and printed the model using a 3D printer.

International Day of Light Science Roadshow 16th May 2022

- Organized a class-to-class International Day of Light awareness campaign. Made naked-eye holograms on site, brought optical devices such as infrared sensors, and popularized basic optical knowledge to passersby.

OTHER LEARNING EXPERIENCE

- Quantum Computing Algorithms for Cybersecurity, Chemistry, and Optimization, Massachusetts Institute of Technology Online

Online courses on Coursera:

- Supervised Machine Learning: Regression and Classification, Stanford Online
- Advanced Learning Algorithms, Stanford Online
- Unsupervised Learning, Recommenders, Reinforcement Learning, Stanford Online

HONORS & AWARDS

Outstanding Student Leader Pioneer 2022
MCM/ICM Honorable Mention 2022

GRANTS & FELLOWSHIPS

Science & Technology Innovation Scholarship (**Top 5%** in 600 students) 2022
Scholarship for academic excellence (**Top 5%** in 600 students) 2021