

YANKAI PENG

pengyankai10@gmail.com | (+86) 139-8310-7669

EDUCATION

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| University of Electronic Science and Technology of China (UESTC) | 09/2020-07/2024 |
| • B.E. in <i>Communication Engineering</i> GPA: 3.81/4.0 (Top 4%) | |
| • Scholarships: Academic Scholarship of Glasgow College, UESTC (Top 5%) | 09/2021 |
| 1 st Prize, UESTC Outstanding Student Scholarship (Top 10%) | 09/2021 |
| 2 nd Prize, UESTC Outstanding Student Scholarship (Top 20%) | 09/2022 |
| University of Glasgow (UoG Joint Program) | 09/2020-07/2024 |
| • B.E. in <i>Electronics and Electrical Engineering</i> GPA: 18.93/22 | |

PUBLICATION

- **Yankai Peng**, Zhiyuan Wang, Hailin Li, Ning Dong. “Efficient vehicular networks offloading using hybrid localization algorithm and deep reinforcement learning”, accepted by the International Conference on Machine Learning and Automation (CONF-MLA 2023).
- Yanxi Du, Ke Zhang, **Yankai Peng**. “Interruption-aware Task Offloading for Vehicular Edge Computing of Parking Lot”, accepted by IEEE UIC-2023 Conference.

RESEARCH PROJECT

Wireless Communication Related to Internet of Things 07/2023-08/2023

Research Assistant and Team Lead, Supervised by Prof. Danijela Cabric (UCLA)

- Optimizing computing and communication resources for the Internet of Vehicles.
- Enhanced a hybrid localization algorithm by employing the Extended Kalman Filter and Multilateralization techniques, and validated its efficacy through simulation and feasibility testing using real-world datasets.
- Integrating the hybrid localization algorithm with Deep Reinforcement Learning to enhance offloading strategies optimization within urban canyon environments.

Edge Cache Resource Optimization in Vehicular Edge Caching Network 10/2022-Now

Research Assistant, Supervised by Prof. Ke Zhang (UESTC)

- Developed a mathematical model leveraging graph learning, LSTM, and dynamic spectrum analysis to enhance caching efficiency and minimize latency in vehicular networks.
- The research resulted in a remarkable improvement in caching efficiency, leading to a substantial reduction in network latency and a significant enhancement in overall user experience.

Wafer Semiconductor Inspection using Deep Learning Method 10/2021-10/2022

Research Assistant, Supervised by Dr. Huan Wang (Tsinghua University)

- Implemented wafer defect classification using ResNet-18, leveraging the WM-811k Wafermap dataset for model training, and conducted comprehensive preprocessing, fine-tuning, and evaluation processes.
- Integrated the model into the wafer inspection system for practical, real-world classification.

COURSE PROJECT

Multi-functional Line-tracking Intellige Robot 03/2023-06/2023

Team Lead and Technician, Supervised by Dr. Oluwakayode Onireti

- Led a team to develop an intelligent robot with wireless communication, automatic line patrol, arrow recognition, and obstacle avoidance functions based on micro-controller, power driving system, and various sensors (scoring 95/100).
- Implemented the wireless communication function using the HC-12 wireless communication module, integrated it with the clock module, and sent the real-time time and information of all the members when the intelligent robot arrived at the designated place.

MIT Online Computer Vision Program 01/2022-02/2022

- Completed a diverse range of courses and projects, focusing on key areas such as deep learning, image processing,

and object detection.

- Worked on real-world computer vision projects encompassing facial recognition, and autonomous vehicle navigation, and utilized image segmentation techniques to achieve an accuracy rate exceeding 95% in a medical image classification problem.

ACADEMIC COMPETITION

National College Student E-commerce “Innovation, Creativity & Entrepreneurship” Challenge 04/2021

- Designed and developed a comprehensive sports-focused software application that offered features including venue booking, real-time sports partner matching, and online shopping for sporting goods.
- The project achieved recognition by winning the third prize in the provincial competition.

INTERNSHIP

Huawei Cloud 07/2022-09/2022

Data Analysis Engineer Intern, Cloud Computing Eco-Solution Department (Shenzhen, China)

- Cleaned, collated, and analyzed customer data from the Haydn Solution Digital Platform using Python and SQL. Created visually appealing data visualizations using Fine-BI, enabling the department to have access to a customer data dashboard for the first time.
- Compiled and organized Huawei Cloud solution demos, contributing to their availability on the Huawei Cloud platform. Acknowledged as an exceptional intern, receiving recognition for outstanding performance at Huawei.

EXTRACURRICULAR ACTIVITY

Teaching Assistant Experience 08/2023-Present

TA of Signal and System (Glasgow College, UESTC)

- Helped Dr. Htet with attendance, grading, and other administrative tasks.
- Gave one-on-one or small group instruction and lesson review to the students.

Class Two (Communication and Microelectronics Program) 09/2021-Present

Class Monitor

- Oversaw daily class management, including tracking attendance and disseminating important announcements to classmates.
- Organized class activities, such as dinners and trips, successfully self-organizing four group outings.
- Participated in the development of an exemplary class group, serving as the representative and delivering speeches, ultimately earning the title of “Outstanding Class Group” at the university level.

Peer Support Center 05/2022-06/2023

Team Lead

- Facilitated and actively participated in various academic guidance sessions aimed at providing valuable advice to lower-class students, helping them better prepare for university life.
- Organized over 10 academic lectures and assembled a team of more than 50 outstanding academic advisors from different grades, benefiting over 1,000 students in the college.

Navigator Studying Abroad Club 10/2020-10/2022

Vice President

- Organized 50+ study abroad salons covering topics like university planning, overseas applications, and study abroad experiences.
- Assisted in establishing the college’s study abroad guidance system, contributing to the development of a comprehensive study abroad framework.

ADDITIONAL INFORMATION

Volunteer Services:

Volunteer of China Satellite Navigation Annual Conference 10/2020-11/2020

English Teaching Volunteer in Bali, Indonesia 02/2018

Technical Skills:

[Programming] Python (2+ yrs) | MATLAB (2+ yrs) | C (2+ yrs) | SQL (1+ yr)

[Software] LTspice (2+ yrs) | Origin (2+ yrs) | LaTeX (2+ yrs) | Vivado (1+ yr) | FineBI (1+ yr) | Ansys HFSS (1+ yr)

Languages Spoken: Chinese (native), English (proficient)