Chaowei LIU

Telephone: +86-18957519503 | Email: e1011116@u.nus.edu
Homepage: Chaowei Liu's Homepage

EDUCATION

- **National University of Singapore** 08/2022-01/2024
  - Master of Computer Engineering (Machine Intelligence and Applications) Singapore
  - GPA:4.67/5;
  - Join **Learning and vision lab**

- **National University of Singapore-NUS(Suzhou) Research Institute** 09/2021-05/2022
  "3+1+1" Educational Framework SuZhou,China
  - Major in Electrical and Computer Engineering
  - GPA:90.25/100; **Outstanding Graduation Project**(10%)

- **Harbin Institute of Technology, Shenzhen** (HITsz) 09/2018-06/2022
  Bachelor of Science in Communication Engineering Shenzhen, China
  - GPA:85.1/100; **Outstanding Graduates**(10%),**Second Class Honor Scholarship**(15%), **Excellent Student Honor**

PUBLICATION

On the feasibility of specialized ability stealing for large language code mode (ICSE2024,fourth author)

Lens-to-Lens Bokeh Effect Transformation. NTIRE 2023 Challenge Report (CVPR2023W, Challenge Report)

MetaISP: Efficient RAW to sRGB Mappings with Merely 1M Parameters (Under review on AAAI24,Co-first author)

DocStormer: Revitalizing Multi-Degraded Colored Document Images to Pristine PDF Versions (Under review on CVPR24,Co-first author)

RESEARCH/PROJECT EXPERIENCE

- **Learning Robust Enhancer in low-level vision**
  NUS master project 09/2022-04/2023
  *instructed by Professor **Xinchao Wang*** Singapore
  - Trying to apply diffusion model in low-level vision tasks (AWB, RAWtoRGB)
  - Trying to apply MobileVit in low-level vision tasks (RAWtoRGB) (**Under review on AAAI24**)
  - Attending CVPR NTIRE2023 Bokeh Effect Transformation(**Leader,Third Place**)

- **Research on data augmentation strategy of graph neural network**
  Final Year Project
  Outstanding Graduation Project *(NUS Suzhou Research Institute)* 09/2021-05/2022
  *instructed by Professor **Xinchao Wang*** Su Zhou,China
  - Propose a new data augmentation strategy of graph neural network based on changing feature matrix.
  - Propose a hyperparameter search algorithm based on reinforcement learning which outperform optuna.
  - Achieve up to 7% absolute F1 performance improvements across architectures and datasets.

- **Research on the Mura Defect Inspection of AMOLED Screen**

  Act as core member, College Students' Innovation & Entrepreneurship Project (CSIEP)

  *Won **National First Honor Prize** in CSIEP* Shenzhen, China

  *instructed by Professor **Xiao Junjun*** 09/2019-09/2021

➢ Utilized deep learning network yolo-v3 to successfully train Mura defect inspection network

➢ Achieve high accuracy of 80% ,thus providing support for the production of screen automation.

- **Smart Garbage Car**

  Act as core member, Term Project

  The First Project Approval Prize of Harbin Institute of Technology, Shenzhen Shenzhen, China

  *instructed by Professor **Li Wei*** 11/2018-12/2019

➢ Programmed MCU driving code based on Arduino language and designed a robotic arm model to grab and lift the rubbish bin by using Solidworks.

➢ Compiling all functions in the tested APP and completed automatic and remote control.

INTERNSHIP EXPERIECE

- **HUAWEI TECHNOLOGIES CO, LTD** 9/2023-now

Algorithm Researcher

➢ Conducted research on multi-degradation issues in document images, developing a model that outperforms existing solutions in both industrial settings (Xiaomi, Quark) and academic research.

➢ Filed one patent related to the innovative model, and a research paper is currently being prepared for submission to CVPR 2024.

- **DIDI TRAVEL TECHNOLOGIES CO, LTD** 2/2022-4/2022

Algorithm Engineer BeiJing,China

➢ According to the driver's voice to text data, using textcnn and Bert model,to construct the suspected crime alarm model.

➢ Compared with the original model of the company (XGBT). My model's accuracy increased by 20%, the regression rate increased by 10%, and the influence area decreased.

➢ Research frontier papers, organization sharing.

- **HUAWEI TECHNOLOGIES CO, LTD (SHENZHEN)** 6/2021-8/2021

Engineer Shenzhen, China

➢ Be responsible for completing the software construction and maintenance of the supply chain system;

➢ Optimizing API performance problems in database problems.

PERSONAL SKILLS

Python, C++,C and Java Language, Pytorch, DGL, MATLAB,Latex