Chih-Chieh Yang

M.S., Dept. of Photonics, Yang Ming Chiao Tung University 2021 - 2024

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Graduated from the Department of Photonics, National Yang Ming Chiao Tung University (NYCU), Taiwan, with a focus on imaging from an optics perspective. Proficient in applying programming skills to tackle numerical challenges, and seamlessly integrate domain expertise with programming acumen to solve complex problems. My most recent research pertains to depth-based fall detection in embedded systems.

Education

- M.S., Department of Photonics, Yang Ming Chiao Tung University Sep 2021 - Jan 2024 (GPA 4.00 / overall 4.0 | 4.00 last 60 credits 4.0)
- B.S., Department of Photonics, Yang Ming Chiao Tung University Sep 2017 – Jul 2021 (GPA 3.97 / overall 4.0 | 4.00 last 60 credits 4.0)

Awards

- Academic Excellence Award (2021 Fall / 2020 Fall / 2019 Fall / 2018 Spring / 2018 Fall / 2017 Spring)
  - Semester grade is ranked in the top 5% of the department

Professional Skills

- Field: Optics (Geometrical optics, Fourier optics), Image processing (Color engineering)
- Programming language: Python, C, C++

Internship and experiences

- Intern, Apple Inc. , Taiwan Feb 2023 – Sep 2023
  - Novel display technology research for future products
- Intern, Taiwan Semiconductor Manufacturing Co., Ltd. , Taiwan Jul 2022 – Sep 2022
  - Developed a web-based desktop app for measurement reports
  - Full stack in backend (Python: FastAPI) and frontend (HTML+CSS+JavaScript)
- Participant, APEC APP Challenge , Thailand May 2022
  - Developed a web-based PWA APP aiming to provide a platform to gather small farmers
- Research assistant, Chung-Hua Institution for Economic Research , Taiwan Remote Jul 2021 – Dec 2022
  - Helped distill useful information from the database of the waste management system
  - Designed a model to predict recycled raw materials from target wastes
- TA, The Language of Technical Computing (DEO1611), NYCU 2021 spring, 2022 spring
  - Python tutorial for basic syntax, Numpy, Scipy, Matplotlib, and image transformation
- TA, Linear Algebra (DEO1203), NYCU 2021 spring

Projects

- (Thesis/Graduate) Embedded Real-Time Fall Detection for Edge Computing Using Deep Learning
  - Developed an embedded visual system detecting the falls by depth camera
  - Based on MoViNets, successfully achieved 99.21% accuracy
- (Undergraduate) Image Colorization with Convolutional Neural Networks: Attention U-Net
  - Developed an image colorization model based on Attention U-Net
  - Predicts the channels of a grayscale image in CIE Lab color space to a colorized image
- (Undergraduate) Migraine Prediction Based on Iris Feature Analysis Using Deep Learning
  - Developed a non-invasive migraine prediction approach by analyzing visual attributes
  - Extracted iris images at both eyes to color features in multiple color spaces