

# EXPERIENCE

### Algorithm Engineer

2022/9 - Present

NovaTek Microelectronics Corp.

Hsinchu, Taiwan

- Maintain traditional algorithm IP, include image scaler and HDR
- Design AI models for image and video processing, e.g. highly compressed video enhancement, diffusion super-resolution, detail adjustable super-resolution, and de-flicker
- Trending technology study, topic include diffusion model, computer graphics, and computational photography, etc.

# Teaching Assistant [EE-3031 Computer Programming]

2021/2 - 2021/7

National Taiwan University

Taipei, Taiwan

• Provide TA hours, support weekly problem-solving seminars, assign and correct assignments and final exam.

#### AI Research Intern

2020/7 - 2020/9

Caloudi Corporation

Taipei, Taiwan

- Fully process time series anomaly detection and forecasting, use signal processing and ML techniques with Python
- Create and manage RESTful API of anomaly detection and forecasting and deploy on Azure app service

#### EDUCATION

### **National Taiwan University**

Taipei, Taiwan

M.S. in Graduate Institute of Communication Engineering

2020/9 - 2022/6

Data Science and Smart Networking Group

- GPA: 4.2/4.3 Ranking: 26/141(18.4%)
- Selected Courses: Advanced Computer Vision, Digital Visual Effect, 3D Computer Vision with Deep Learning Applications, Deep Learning Computer Vision, Digital Image Processing, Data Science
- Master Thesis: Multiple Degradation Image Enhancement, Domain Adaptation, Object Detection and Beyond Advisor: Prof. Soo-Chang Pei

# **National Central University**

Taoyuan, Taiwan

B.S in Computer Science and Information Engineering

2017/9 - 2020/6

- Credit: 170 GPA: 3.93/4.0 (Overall) 4.0/4.0 (Major)Ranking: 24/134 (17.9%)
- Interdisciplinary program: creativity and entrepreneurship program
- Selected Courses: 3D Computer Graphics, Computer Vision an Overview, Artificial Intelligence, Neural Network, Computational Intelligence, Introduction to Deep Learning, Software Engineering Practices
- Undergraduate Research: AI Camera: Application of Photography Aesthetic Assessment Based on Neural Networks Adviser: Prof. Mu-Chun Su
- Leadership: Minister of Manuscripts Group, Literary Award of National Central University

### PUBLICATION

- [1] Yu-Wei Chen\*, Soo-Chang Pei. "Always Clear Days: Degradation Type and Severity Aware All-In-One Adverse Weather Removal", IEEE Access, 2025. *Citation:* 7
- [2] Yu-Wei Chen\*, Soo-Chang Pei. "Domain Adaptation for Underwater Image Enhancement via Content and Style Separation" IEEE Access, 2022. *Citation: 38*
- [3] Yu-Wei Chen\*, Soo-Chang Pei, Chiou-Shann Fuh, "DTLN: A Deep Two branch Lightening Network with Saturation Adjustment for Low light Enhancement", in Proc. of the 34 th IPPR Conf. on Computer Vision, Graphics and Image Processing (CVGIP), Aug. 22 24, 2021.

# AWARDS AND HONORS

- Second Place in 2019 International ICT Innovative Services Awards Titansoft agile develop award
- Excellent grades in 2019 AICUP

# TECHNICAL SKILLS

**Programming Languages**: Java, Python, C, C++, X86 assembly **Frameworks**: Pytorch, Keras, Tensorflow, OpenCV, OpenGL

Developer Tools: Git, MySQL, Visual Studio, PyCharm, IntelliJ IDEA, Virtual Box, Postman, Putty

Technical Writing: LATEX, Markdown