Chen-Wei Chang

stevenfreecom1@gmail.com chenwei891213.github.io linkedin.com/in/chenwei891213

Education

M.S. National Yang Ming Chiao Tung University — **Hsinchu, Taiwan**
Institute of Artificial Intelligence Innovation (GPA 4.0/4.3) — *Jul. 2023 – Aug. 2025*

B.S. National Taipei University of Technology — **Taipei, Taiwan**
Department of Electronics Engineering (GPA 3.91/4.0) — *Sep. 2019 – Jun. 2023*

Work Experience

AI/ML Application Engineer
TSMC, VNAP Department, Hsinchu, Taiwan — *Mar. 2026 – Present*
- Conducting computer vision research.

Full-Stack Engineer — **Flask, React.js, MySQL, Linux**
NYCU Mobile and Pervasive Computing Laboratory, Hsinchu, Taiwan — *Sep. 2023 – Aug. 2025*
- Developed multiple analysis features on CoachAI website, including scoring position replay, smash-to-net speed statistics, and a doubles website extension.
- Built a backend management system for account/group management, dataset authorization, and access control.
- Maintained the website on Linux servers.

Full-Stack Engineer — **React.js, SQL Server, ASP.NET MVC**
Mores Tech, Taipei, Taiwan — *Feb. 2023 – Jun. 2023*
- Developed a feature to generate various OpenOffice format reports for reference and download through LibreOffice integration.
- Developed a message and Q&A feature allowing users to report project updates to different departments through the system and track the progress of the projects.

Publications

- **LongE2V: Long-Horizon Event-based Video Reconstruction, Prediction, and Frame Interpolation with Video Diffusion Models** — **SIGGRAPH 2026**
  Cheng-De Fan, Chun-Wei Tuan Mu, Chen-Wei Chang, Chin-Yang Lin, Kun-Ru Wu, Yu-Chee Tseng, Yu-Lun Liu Link
  Unifies event-based video reconstruction, prediction, and interpolation via pre-trained diffusion priors, curbing temporal drift in long sequences with Autoregressive Unrolling and Adaptive Context Switching.
- **GCC: Generative Color Constancy via Diffusing a Color Checker** — **CVPR 2025**
  Chen-Wei Chang, Cheng-De Fan, Chia-Che Chang, Yi-Chen Lo, Yu-Chee Tseng, Jiun-Long Huang, Yu-Lun Liu Link
  Leverages pretrained diffusion-based inpainting models to generate color checkers within images, enabling accurate illumination estimation for auto white balance across different camera sensors.
- **SpectroMotion: Dynamic 3D Reconstruction of Specular Scenes** — **CVPR 2025**
  Cheng-De Fan, Chen-Wei Chang, Yi-Ruei Liu, Jie-Ying Lee, Jiun-Long Huang, Yu-Chee Tseng, Yu-Lun Liu Link
  Dynamic specular 3D scene synthesis combining 3D Gaussian Splatting with physically-based rendering and deformation fields.
- **IllusionMaker** — **Under review at SIGGRAPH Asia 2025**
  Chun-Wei Tuan Mu, Zheng-Hui Huang, Chen-Wei Chang, Yung-Yu Chuang, Jia-Bin Huang, Yu-Lun Liu
  A diffusion-based model for spatially varying defocus blur editing that enables precise depth-of-field control, with applications in perspective illusion videos and DSLR-like bokeh simulation.

Patents

- **Generative Color Constancy** — **U.S. Patent Application, filed May 2025**
  Chen-Wei Chang, Cheng-De Fan, Chia-Che Chang, Yi-Chen Lo, Jiun-Long Huang, Yu-Lun Liu
  MediaTek Inc.; based on GCC (CVPR 2025), MediaTek MARC industry–academia project.

Selected Honors and Awards

- Master's Thesis Honorable Mention, IPPR — Aug. 2026

- Master's Thesis Award, Taiwanese Association for Artificial Intelligence — Dec. 2025
- Academic Achievement Award, Department of Electronics Engineering, NTUT — Nov. 2020
- Academic Achievement Award, Department of Electronics Engineering, NTUT — May 2020

Projects

- **Golf Ball Trajectory Estimation System** — Link
  Developed a computer vision system using high-speed cameras to track golf balls, calculate flight parameters, and visualize predicted flight trajectories on a web-based platform.
- **RESTful Web Game Platform** — Link
  Designed and implemented an interactive web gaming platform with user authentication, classic arcade games, and competitive leaderboards using HTML, CSS, JavaScript, Express.js, and SQLite.

Technical Skills

Programming Languages: Python, C++, JavaScript (React.js), SQL (MySQL, SQL Server), Verilog
Libraries and Tools: PyTorch, OpenCV, Git, Linux

Extracurricular Activities

- **Event Coordinator**, Student Association, Department of Electrical Engineering, NTUT — Sep. 2020 – Sep. 2021