

JING-YEU CHEN

JAMES CHEN

Email pp31630@gmail.com
GitHub github.com/movehand
Website movehand.github.io

Experiences

Cino Group

New Taipei City, Taiwan

Software Engineering Manager

Feb 2020 - Present

- Recruited, managed, and mentored an 8-person R&D and DQA team, specializing in computer vision and embedded Linux, overseeing the entire software development lifecycle.
- Led the development of a next-generation barcode decoding engine, significantly improving decoding rates for complex barcodes by 294% and for general barcodes by 52%.
- Reduced 1D barcode decoding time by 95%, from 60ms to 3ms, and 2D barcode decoding time by 80%, from 100ms to 20ms, while simultaneously decreasing the decoding library size by 37%.
- Leveraged data augmentation and a large image database for robust system stability testing.
- Optimized image processing pipelines with SIMD acceleration across ARM NEON, x86 SSE2, and MIPS architectures, achieving platform-specific speedups up to 6.22x.
- Directed the development of an Auto-Focusing algorithm for a key station on the assembly line, resulting in a 70% reduction in cycle time.
- Spearheaded the launch of 15+ diverse barcode scanning product lines, employing a modular software architecture to effectively accommodate diverse hardware components.
- Led the design and development of several key features enabling real-time camera control and synchronization through integrated SOC, CMOS sensor, and MCU functionality.
- Led cross-functional efforts, collaborating with 4 PMs, and 2 Technical Support Engineers to address real-world decoding challenges and ensure robust product performance.
- Mentored the R&D and DQA teams, achieving the highest average performance rating across the company.

Software Architect

Feb 2017 - Feb 2020

- Developed 1D and 2D barcode decoding and detection systems, leveraging Python/OpenCV for rapid prototyping and C/C++ for efficient execution on SoCs.
- Established a new software department and led the successful transfer of technology from an overseas outsourced team.
- Implemented departmental standards for recruitment, release/debug, and version control.
- Created an image debugging tool that remains the standard development and debugging tool for the image processing team.

Skills

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- **Programming Languages:** C, C++, Python
 - **Embedded Systems:** ARM, MIPS
 - **Computer Vision & Image Processing:** Object Detection, OCR, Camera Control
 - **Performance Optimization:** SIMD (ARM NEON, x86 SSE2, MIPS SIMD Architecture), Parallel Processing, Memory Management, Real-Time Computing
 - **Development Tools:** CMake, Git, GitHub, GitLab, Valgrind, ASan, OpenCV

Education

National Taiwan University

Taipei, Taiwan

Master of Computer Science and Information Engineering

Sep 2014 - June 2016

Bachelor of Computer Science and Information Engineering

Sep 2010 - June 2014