

Po Peng

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PROFESSIONAL EXPERIENCE

Moxa | *Embedded Software Engineer - R&D*

Taipei, Taiwan

Languages: C, Shell Scripts, HTML, JavaScript

Jun. 2021 – Oct. 2024

Technologies & Tools: Linux, TCP/IP, SQLite, Makefile, I2C, UART, GitLab(CI/CD pipelines), Docker, Jira

- Protocol Gateways (based on Linux):
Achieved USD 3M/year revenue with +10% YoY growth (2021 - 2024)
 - Led modularization of the IEC 60870-5-101/104 protocol stack for [MGate 5192](#), reducing integration time for new products by over 50% through collaboration with front-end, PM, and SQA teams
 - Built a customized full-stack solution for [MGate 5216](#), enabling customer onboarding and reducing debugging time between software R&D and clients by over 90%
 - Improved the RESTful library for the MGate 5000 series using an IPC-based design, reducing API maintenance and development time by 10%
 - Developed unit tests and valgrind scripts for MGate 5000 series software modules integrated with GitLab CI, enhancing system stability and enabling early detection of memory issues with 90% test coverage
 - Co-developed the SD card backup module with the Linux kernel team and independently resolved issues through kernel source code analysis
- Media Converters (based on MCUs):
 - Led the software development of [IMC-P21A-G2](#) (Ethernet-to-fiber) from project initiation to market launch, collaborating with HW, PM, and SQA teams
 - Resolved sample point and communication issues for Japanese clients using [ICF-1171I](#) (CAN-to-fiber)

EDUCATION

University of Washington

Seattle, WA

M.S. Electrical and Computer Engineering

Sep. 2025 – June 2027

National Taiwan University of Science and Technology | GPA: 3.92/4.3

Taipei, Taiwan

M.S. Electrical Engineering (Mobile Communication Specialization)

Sep. 2018 – Aug. 2020

Chang Gung University | GPA: 3.7/4.0

Taoyuan, Taiwan

B.S. Electrical Engineering, Division of IC Design

Sep. 2014 – Jun. 2018

PROJECTS

[Analysis of Call Admission Control Schemes for Secondary Users in CRN – M.S. Thesis](#) **Sep. 2019 – Aug. 2020**

- Proposed a novel access mechanism for cognitive radio networks (CRN), combining spectrum leasing, channel aggregation and hand-offs to improve spectrum utilization, achieving lower user delay and higher throughput

Intelligent Curtain System – Undergraduate Capstone Project

Jul. 2016 – Jun. 2017

Award: first place in the final project exhibition

- Created an intelligent curtain system using [SmartServer](#) and Zigbee sensors with Power Line Communication, enabling automatic adjustment based on illumination levels
- Designed and implemented a curtain control PCB using D flip-flops, BJTs and RLC components, completing the entire process from circuit design to soldering to ensure seamless system integration
- Programmed Zigbee firmware to ensure accurate storage of temperature and brightness data in the SmartServer

Knowledge Discovery in Database (KDD) Cup Contest

Feb. 2019 – Jun. 2019

Result: weighted F1-score of 0.6884 on the test set, close to the first-place team's score of approximately 0.7

- Developed machine learning workflows in Python, including preprocessing, feature engineering, and model training, to predict Baidu Map users' preferred transportation modes using 500,000+ data points

RTOS Implementation

Sep. 2018 – Jan. 2019

- Modified the $\mu\text{C}/\text{OS-II}$ kernel scheduling to implement and evaluate various scheduling algorithms, including Earliest Deadline First Scheduling, Non-Preemptible Critical Sections and Priority Ceiling Protocol

FPGA System Design Lab

Sep. 2017 – Jan. 2018

- Implemented a 2D LED dodging game using Verilog on an FPGA Development Board