Po (Eric) Peng

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Education

University of Washington 09/2025 – 06/2027
M.S. Electrical and Computer Engineering — Seattle, WA

National Taiwan University of Science and Technology | GPA 3.92 / 4.3 09/2018 – 08/2020
M.S. Electrical Engineering (Mobile Communication Specialization) — Taipei, Taiwan

Chang Gung University | GPA 3.7 / 4.0 09/2014 – 06/2018
B.S. Electrical Engineering, Division of IC Design — Taoyuan, Taiwan

Skills

- **Programming Languages**: C/C++, Python, Java, Shell Scripts, JavaScript, Verilog
- **Embedded Systems**: Linux kernel, Zephyr, MCU, Bootloader
- **Protocols**: TCP/IP, I2C, UART, Ethernet, Zigbee, Modbus, CAN bus
- **Software Development**: GitLab CI/CD, Docker, Jira, Git, SQLite, Makefile, SDLC

Work Experience

Moxa 06/2021 – 10/2024
Embedded Software Engineer - R&D

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, significantly reducing integration time for new products by over 50% through close collaboration with UI/UX, PM, and SQA teams
- Designed and implemented a proprietary CAN protocol module from scratch, covering main communication, backend infrastructure, data exchange, diagnostics features, and all related peripheral software modules
- Built a full-stack MGate 5216 solution, facilitating customer adoption and reducing debugging time by 90%
- Improved the RESTful library for MGate 5000 series via IPC-based design, reducing API development time by 20%
- Designed the SD card backup module for MGate 5000 series, independently resolving issues via Linux kernel analysis
- Developed unit tests and valgrind scripts for MGate 5000 series software modules integrated with GitLab CI

Media Converters (based on MCUs)

- Led the full-cycle software development of IMC-P21A-G2 (Ethernet-to-fiber) , coordinating with cross-functional HW, PM, and SQA teams from project kickoff to successful market launch
- Resolved communication issues for Japanese clients on ICF-1171I (CAN-to-fiber) by tracing MCU code with IC specifications

Projects

Analysis of Call Admission Control Schemes for Secondary Users in CRN – M.S. Thesis 09/2019 – 08/2020

- 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 07/2016 – 06/2017
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 02/2019 – 06/2019
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 09/2018 – 01/2019

- Modified the µC/OS-II kernel scheduling to implement and evaluate various scheduling algorithms, including Earliest Deadline First Scheduling, Non-Preemptible Critical Sections and Priority Ceiling Protocol