XIN-LONG LI

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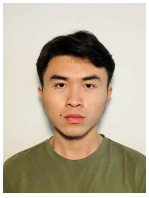
Age: 26
Hometown: Lüliang, Shanxi



Education

ShanghaiTech University 2022.9 – 2025.6 (Expected)
M.Eng. in Electronic Science and Technology, GPA: 3.02/4

- Core Courses: FPGA Reconfigurable Computing, Digital Signal Processing, Matrix Computation, Robotics, Electric Machinery, and Motion Control.
- Research Focus: Multirotor UAV Control.

Guilin University of Electronic Technology 2015.9 – 2019.6
B.Eng. in Measurement and Control Technology and Instruments, GPA: 79.8/100, Ranking: 21/125

- Core Courses: Analog/Digital/High-Frequency Circuits, FPGA Design, Microcomputer Principles, Embedded Systems, Data Structures and Algorithms, Signal and Systems.

Work Experience

Siglent Technologies CO., Ltd | R&D Center 2019.7 – 2021.6
Hardware Engineer, High-Speed Digital PCB Design

- Responsible for the design and development of high-speed digital PCBs, including component selection, schematic design, and BOM maintenance.
- Coordinated with mechanical, layout, FPGA, and software engineers, guided PCB design, conducted hardware-software integration testing, and resolved manufacturing issues to ensure smooth mass production.

Project Experience

Enhancing Drone Flight Stability in Confined Spaces | ShanghaiTech University 2024.1 – Present

- Researched complex airflow disturbances affecting multirotor drones in confined spaces and optimized the flight control system to enhance flight stability.
- Modified the Crazyflie drone’s flight control by integrating models for ground effect, ceiling effect, and wall effect into the system.
- Used FreeRTOS for flight control task scheduling and employed GCC, Kbuild, and make toolchain for compilation and development.

FPGA-based ORB Algorithm Acceleration | ShanghaiTech University 2023.9 – 2023.12

- Accelerated the ORB algorithm on a Xilinx Zynq UltraScale+ MPSoC ZCU104 evaluation board, reducing runtime from 150ms to 25ms.
- Optimized and accelerated the original C-based algorithm using Vitis and Vivado tools and successfully deployed it to the FPGA.

Training a Robot Arm to Fold Using Reinforcement Learning | ShanghaiTech University 2023.3 – 2023.6

- Trained a Kinova robotic arm to fold towels using reinforcement learning, with state monitoring provided by an Intel Realsense D435i camera.
- Responsible for setting up the data collection environment.

Upgrade of 1GHz Oscilloscope Hardware Circuit | Siglent Technologies CO., Ltd 2019.7 – 2021.6

- Led the hardware upgrade of a 1GHz bandwidth oscilloscope, optimizing the power tree, clock tree, signal routing, and EMI performance.
- Improved power integrity and signal integrity by optimizing complex circuits involving DDR3, high-speed ADC, and Xilinx Artix-7 FPGA.

Skills

- Hardware Design Tools: Altium Designer, OrCAD, PADS, Vivado, Vitis
- Programming Languages: C, C++, Python, Matlab
- English: CET-6, Proficient in professional communication

Awards

- 2022, ShanghaiTech University Scholarship (Class B)
- 2018, Second Prize in the South China Region of the National Undergraduate Smart Car Competition
- 2017, Second Prize in the Guangxi Region of the National Undergraduate Electronic Design Competition
- 2017, National Encouragement Scholarship
- 2015, Guangxi Government Scholarship