JING YANG

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Education

- **European Institute of Innovation and Technology, digital** — European Union
  Joint Double-degrees Master Program - Embedded Systems; — *Sep. 2024 - Jun. 2026*
- **KTH Royal Institute of Technology** — Stockholm, Sweden
  Master of Science - Embedded Systems; — *Sep. 2025 - Jun. 2026*
- **University of Bologna** — Bologna, Italy
  Master of Science - Computer Science and Engineering; — *Sep. 2024 - Jul. 2025*
  Courses: *Distributed Systems, Machine Learning and Deep Learning, Intelligent Systems Engineering*
- **Southeast University** — Nanjing, China
  Bachelor of Engineering - Information Engineering; — *Sep. 2020 - Jun. 2024*
  Courses: *Digital Communications, Digital signal Processing, Artificial Intelligence and Deep Learning, Digital Circuit and Systems*

Skills

- **Coding**: Python, C, C++, Matlab, Java, JavaScript, Verilog, HTML
- **Hardware Skills**: Vehicular Systems, Hardware testing, Circuit design, Verification, PCB layout, AI deployment
- **Platforms**: Linux, Windows, Arduino, Raspberry, STM32, ESP32, Xilinx
- **Languages**: Mandarin(Native); English(C1)

Professional Experience

- **Tesla, Inc.** — Shanghai, China
  Electrical test Intern(HV Battery), R&D — *Mar. 2024 - Sep. 2024*
  - **Product Validation**: High-voltage battery module and pack-level reliability test and validation, including vibration test, impact test, thermal test, environmental test like HTHE and PTCE.
  - **Test Development**: Development of automated testing and data analysis using Python. Responsible for designing an autonomous control system with GUI for the Drop Rig bench.
  - **Result Analysis**: Developed an app for vibration data analysis based on Matlab and designed an internal website for recording experimental data and reliability analysis.
- **NIO Inc.** — Shanghai, China
  Power Engineer Intern, R&D — *Oct. 2023 - Feb. 2024*
  - **Low voltage power management**: Participated in the development of low-voltage power management systems for electric vehicles, focusing on the integration and optimization of power distribution components.
  - **Automated Testing**: Conducted testing and validation modules, developed automation testing software and platform by Python to enhance accuracy and efficiency.
  - **ECU fuction Validation**: Responsible for Efuse function test and calibration test on latest NT3 car.
- **Chengdu Zhimingda Electronics Co., Ltd.** — Chengdu, China
  Embedded Firmware Engineer Intern, R&D — *Jul. 2023 - Sep. 2024*
  - **SPI Driver Development**: Designed SPI driver module using Verilog; optimized data exchange with FIFOs.
  - **Advanced Data Transmission**: Developed AD7656 transmission modules; employed time-division and multiplexing.

Projects

- **MindRoll: Distributed Multiplayer Dice Game**: Led core logic and system integration in a turn-based dice game using Python and Pygame. Implemented custom RPC, turn synchronization, and fault-tolerant reconnection. Tech: Python, Pygame, RPC, JSON, TCP. (2025)
- **CPU Design Using Vivado (Digital System Course Design)**: Constructed a 32-bit CPU. Programmed instruction set and internal registers in Verilog, implemented arithmetic operations on Xilinx board. Tech: Verilog, Digital IC disgn. (2024)
- **Research on the Sweeping Robot based on Optical Positioning Technology (Chinese National Training Program of Innovation)**: Created new optical positioning modules and PCBs to apply, developed an open-source robot for autonomous navigation based on positioning method. Tech: Matlab, Arduino, Analog IC design, PCB layout, AOA. (2023)
- **Multi-Directional Planar Robot with Edge AI Voice Control (National IoT Contest)**: Designed a robot with intelligent voice control using Espressif ESP32 Kit, applied the built-in Rainmaker Cloud. Won provincial and national awards. Tech: C++, ESP32, MQTT, TensorFlow, IoT. (2022)

Publications

[**C.1**] **Jing Yang**, *et al.* (2023). **An Efficient Visible Light Positioning and Rotation Estimation System Using Two LEDs and a Photodiode Array**. In *2023 IEEE Wireless Communications and Networking Conference (WCNC)*(Glasgow, United Kingdom, 12 May 2023). DOI: 10.1109/WCNC55385.2023.10118745

[**P.1**] Bingcheng Zhu, **Jing Yang**, *et al.* (2023). **Receiver Positioning and Rotation Angle Estimation System Based on Photodiode and LED**. Patent CN115902946A, 4 Apr 2023.