# MR. WEIGANG WANG

## PERSOAL INFORMATION

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## EDUCATION

**Southeast University (**"985 Project" and "211 Project")                         Nanjing, China

Bachelor of Engineering                                                    Sep. 2018 – Jun. 2022

- Major: Automation
- GPA: 3.62/4.0 (Average Score: 87.3/100)

## PROFESSIONAL EXPERIENCE

**Nanjing ACOINFO Co., Ltd**                                              **Nanjing, China**

*Embedded Software Engineer*                                             *Jul. 2022-present*

- Developed new features and maintained TCP/IP network protocol stack and Bluetooth protocol stack of real-time operating system SylixOS;

**Main Projects**

**Implementation and Optimization of SylixOS TCP/IP Stack**             **May 2024-present**

*Core Developer*

- Implemented the Generic Receive Offfoad (GRO) feature in SylixOS, resulting in the decreasing of CPU usage for receiving high-throughput network packets to about 20% of that before the improvement;
- Added ICMP TimeStamp and TCP urgent reception features;
- Fixed 23 bugs in SylixOS TCP/IP stack to enhance network stability;

**Design and Development of Bluetooth Subsystem for SylixOS**          **Jan. 2023-Apr. 2024**

*Project Leader & Core Developer*

- Prepared the architecture design, confirmed the functionalities of each module and the interface among different modules;
- Compared the cost, reliability and stability, confirmed the Bluetooth chip: RTL8761B;
- Implemented Bluetooth general functionalities, including scanning, pairing, connecting, etc;
- Supported Bluetooth devices driver in SylixOS, including keyboards, mice, and audio devices;
- Designed a comprehensive Bluetooth testing strategy to ensure the stability and high performance of the subsystem;

**Implementation of Time-Sensitive Networking (TSN) Netcard**          **Oct. 2022-Dec. 2022**

*Core Developer*

- Ported a network interface controller with Time-Sensitive Networking (TSN) features;
- Implemented TSN Precision Time Protocol (PTP) and Time-aware scheduler features to enhance network real-time performance;

**Implementation of Network Interface controllers**                    **Jul. 2022-Sep. 2022**

*Core Developer*

- Implemented various network interface controllers, including switches and standard network cards;

- Optimized the performance of the network interface controller drivers to accelerate the packet transfer speed and reduce the CPU usage;

## RESEARCH EXPERIENCE

**Student Research Training Program (SRTP)**                     **Oct. 2020-Oct. 2021**
- Developed the program titled *Design of 3D Cardiac Dynamic Modeling and Analysis System Based on CT Image Processing*;
- Trained a U-Net model for segmentation and annotation of heart chambers in CT images;
- Leveraged cross entropy function as the loss function and adopted Adam optimization algorithm, boosted the average test accuracy to 91.87%;

**Student Research Training Program(SRTP)**                     **Oct. 2019-May 2021**
- Designed *3D Reconstruction of Disabled Persons with Monocular Images* as the core developer;
- Accomplished 3D reconstruction of images of the disabled by SMPL model;
- Trained a ResNet model for the classification of disability types in small data sets;
- Employed RMPE algorithm to estimate the body posture of the disabled and applied the rolling ball method to reconstruct the joint positions of the disabled;

## COMPETITIONS

Interdisciplinary Contest in Modeling (ICM)                     Apr. 2021
- Probed into relevant issues on the sustainability of higher education across countries;
- Retrieved education-related datasets from the World Bank's database, filtered out countries with excessive missing data, and adopted interpolation methods to fill in missing values;
- Built a comprehensive model to assess the overall performance and projected the future development of higher education based on the model;
- Awarded "Meritorious Winner";

The 15$^{th}$ Southeast University Smart Car Competition for College Students          Apr. 2021
- Acquired the Excellent Award;

Jute Cup Southeast University 17$^{th}$ RoboCup Robot Competition          Dec. 2020
- Won the Second Prize;

The 11$^{st}$ Jiangsu Province College Student Robot Competition          Nov. 2020
- Developed the real-time faces and objects recognition software with monocular camera head based on yolo V5 and image pre-processing method;
- Achieved the comprehensive recognition rate of over 50% in the extreme light level;
- Won the Second Award in visual recognition project competition;

The 14$^{th}$ Southeast University Smart Car Competition for College Students          Aug. 2020
- Won the Excellent Award;

The 16$^{th}$ Southeast University Education Robot (Vision Guided Robot) Competition          Aug. 2019
- Won the Excellent Award;

## VOLUNTEER EXPERIENCE

- Volunteer in the editing team of "Mobile Museum" at Southeast University          Mar. 2021
- Member of volunteer service for freshmen at Southeast University          Aug. 2019-Sep. 2019
- Volunteer for home visiting in the summer vacation at Southeast University          Jul. 2019

## HONOR CERTIFICATES

- Southeast University Suzhou Industrial Park Scholarship in 2020-2021          Jun. 2021
- Social Practice Excellence Award from Southeast University in 2019-2020          Dec. 2020
- Excellence Award of Volunteer Service of Southeast University in 2019-2020          Dec. 2020
- Merit Student of Southeast University in 2018-2019          Nov. 2019

## TECHINICAL & LANGUAGE SKILLS

- Programming Languages: C/C++, Shell, Python, JavaScript, Matlab, etc
- Machine Learning: PyTorch, TensorFlow, Matlab, etc
- DevOps & Version Control: Git, Jenkins, etc
- Ielts: 6.0 (Listening: 6.0, Reading: 6.5, Writing: 6.0, Speaking: 5.0)            Aug. 19, 2024
- Assistant Engineer (Series: Digital Economy (Electronic Information) Engineering & Major: Computer and Network)            Apr. 2021