Yi Xiaofei

https://github.com/babywade

Most of my work in Huawei focuses on embedded systems and their solutions.

Power electronics on ARM:

Smart Photovoltaic solutions include DC-AC solar inverter, DC-DC Lithium battery energy storage, DC-DC MPPT optimizer. The technology stack involved in such products is the underlying software development, signal processing, control theory* and circuit. (arch Cortex-M*, *baremetal develop*) <--*2021*-->

Internet of things on ARM:

Digital energy monitoring software platform on opensource system *LiteOS-M(Openharmony).* <-- -*2022*-->

Toolchains maintaining:

Familiar with cross compilation tool chain: arm-none-eabi-gcc, ld, gdb, gdbserver, cmake, make. Independently switch the engineering tool chain from keil to arm GCC tool chain, empower the project team and lead the positioning of underlying problems. <--*2020-2022*-->

Qemu on x86:

Qemu is a machine emulator, develop HC32 machine emulating on Qemu. Successfully run bootloader and singleboard software with a shell on it. Realized IP : uart, intc, gpio-i2c, eeprom. <--*2021-2022*-->

Some other skills:

CI/CD: Configure merge request(MR) control and code checking with Jenkins and CloudDragon. <-- -*2021*-->

Web front-end: Realize 3ms website front-end in our department, using html, css and Javascript. <--*2021*-->

Other fields are derived from the research aspect of students' time.

Numerical Algorithms:

Plasma simulation using Fortran & python(*PlasmaPy*) and Parallel computing. <--*Fortran 2016-2017 python 2021-2022*-->

Model predictive control algorithm in Active power control of wind farm(*Now it is called AI*). <-- -*2017-2018*-->

Machine Vison:

Application of machine vision in UAV power inspection. <--*2019-2020*-->

Some key professional courses in undergraduates and master period :

Circuit principle	Analog Electronic Technology	Digital electronic
Signal and system	Automatic control theory	Power electronic
Electromagnetic field	Dielectric Physics	Electrical Machinery
Embedded system design	Numerical calculation of electromagnetic	Power system analysis

(The underlined part is an important part in IC Design, I think)

Some Commercial software and opensource software I have used :

Pspice(Cadence. inc)	Psim	LTspice	ansys maxwell	Comsol
Matlab	RTDS			

My self introduction:

Born in Weifang, Shandong Province in May 1994, I am admitted to the school of electrical engineering of Xi'an Jiaotong University in 2012 with 675/750 marks in the college entrance examination, majoring in electrical engineering and automation (A+). During this period, in addition to the training program course, he was active in the student union of Xi'an Jiaotong University and participated in the mathematical modeling competition. In September 2016, I went to Shandong University for a master's degree, majoring in high voltage and insulation technology. During this period, I have participated in plasma numerical simulation, model predictive control and other topics, I also taught himself many basic computer courses in the library. After graduation in June, 2020, I first worked in Shandong Electric Power Engineering Consulting Institute for two months, and then switched to Huawei digital energy until now.