WU Zijian

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Male, 23 years old, Beijing
Huazhong University of Science and Technology (HUST) & Paris Saclay University

Welcome to my homepage & blog: wuzijian.ml GitHub

✧ Individual ability

➢ Operating system:
- Windows 10
- Linux (Ubuntu 18)

➢ Programming language:
- C/C++ (OpenCV, Cuda, DirectX, OpenMP…)
- Python (TensorFlow)
- Matlab
- Java (Android)

✧ Education background

2011 - 2014	· Beijing No.12 Middle School, Science
2014 - 2017	· Huazhong University of Science and Technology, Optoelectronic Information Science and Technology, Bachelor
2017 – 2020	· University of Paris-Saclay, Polytech, Electronics, Energy and Systems, Engineer
2019 - 2020	· University of Paris-Saclay, Master in Embedded Systems and Information Processing (dual degree)

✧ language skills

- French (TCF B1、TFI B2)
- English (CET-6、TOEIC 820)
- Chinese (Mandarin)

I'm good at finding problems independently, and I can solve problems from different directions; I hope my code will benefit more and more users; I like everything new, I love programming, sharing, and especially my code used by others.

✧ Experience

2018
- Internship: Beijing Community Radius Information Technology Co., Ltd. (java backend development, familiar with reading and writing MySQL database, writing SpringBoot style port, 1 month)
- Project: Complete the code writing and testing of the entire project independently using FPGA, realize the Bluetooth controlling, tracking the runway through sensors, and automatically avoid the obstacles. It can remotely start and remotely switch modes.

2019
- Internship: Paris Saclay University, Satie Laboratory, CNRS of France, processing laser vibration measurement signals through probability and statistical methods (Independently design an algorithm to adapts and matches different input signals automatically, selecting the required spectrum and verifying the elliptical oscillation of surface waves, 3 months)
- Project: University of Paris Sud (11), Pololu Robot Football Battle (based on C ++, using OpenCV to process web camera data, using ZigBee networking, Windows platform application as control center, Mbed as robot control unit, realizing "Chasing each other" and "passing" operations. As the project leader, I am mainly responsible for detecting the position of the robot and the ball based on the Windows platform through OpenCV, 6 months)
- Project: University of Paris Sud (11), "Space Invader" game (C ++, co-design, complete development of space invader game, 3 months)
- Project: University of Paris Sud (11), Gesture detection (Detect gestures in pictures using traditional image processing methods, including various filters, open/close operations, erosion and dilation, reconstruction…)
- Project: Paris Sud (11th) University, fragmented image matching (using OpenCV's FAST and BRISK algorithms to find key points, and broken image fragments to form a complete picture. This algorithm is mainly used for cultural relic restoration. I am responsible for the image Matching part, combining FAST and BRISK algorithms, and using the key point distance relationship to find the position of the fragment in the whole)
- Hobbies: Repair and coloring of old photos (using GAN algorithm, using Tesla T4 graphics card provided by Colab, using a variety of different tools to fit blurred faces, eliminating photo creases, and coloring black and white photos)
- Project: Use Altium's embedded Eclipse to complete the fast track and trajectory correction of a cute car. The FPGA code reads the data from the sensor and writes the speed of the motor. The main code is implemented by the C language, which includes reading the sensor data in the memory and writing the two motor speeds into the memory.

2020
- Project: University of Paris Sacré, using MATLAB and C ++ (OpenCV):
  - intelligently cutting images using seam carving algorithm, detecting moving objects using Optic Flow, detecting motion with background subtraction algorithm, Trajectory tracking based on MST and NCC, etc.
- Project: Using CNN to identify the types of flowers. Creating a deep learning framework with python's TensorFlow, Determining the most likely label of the current picture by calculating the "distance" between the current picture and the target classes.
- Project: Using DirectX to create the system Earth-Moon, the exhibition of Audi, the moving villain.
- Project: Use Cuda to call the GPU to simply manipulate the image, including image rotation, flipping, coloring, etc.

In addition, I have done other projects on android development, human-computer interaction, FPGA development and so on. For more details, please see the online resume. All projects have been open sourced on my GitHub. Welcome to check it out.