Personal Information

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- Master degree/Shanghai Jiao Tong University/Software Engineer
- Github：https://github.com/kaichiachen

Internship Experiments

Noovo（2017/5 ~2017/9）

Docker automated deployment system

I am responsible for the full-stack in this project. I used Vue.js as front-end, while using golang to develop the back-end and implement the docker container deployed on the remote embedded device. I design the overall full-stack and embedded device deployment architecture. Finally, I can deploy any debian dpkg to remote devices.

VMFive（2016/7~2016/9）

Adjust SDK structure

I am responsible for UI adjustment based on java SDK. This SDK is used for Android system to realize the pop-up window of Android game advertisement and let user try to play it. The original SDK UI is based on native. I modified the native UI to hybrid UI for future A/B testing. After that, we can change UI without update app store app.

移动智库（2016/1~2016/6）

User location data interception, location data prediction

I am responsible for Android-based user location data interception in this project. Since the app needs to be intercepted in the background, the most difficult problem of this project is how to deal with Android operating system and keep operating system from killing my process. I finally use Service component to solve this problem by writing supervising service.
I used these location data and machine learning model-SVM, which is good at classification and high speed, to predict the behavior of user. For example, go to work or get off work. According the result, broadcast proper advertisement message.

Project Experiments

Real-time detection of violation behavior

I am responsible for the research and implement of computer vision algorithm in this project. This project has several functions - identification uniform wearing, violation behavior, crowd density aggregation and on-the-job judgement. I used SSD with Inception net as the worker detection model, transfer-learning to shorten the training time, and 3D convolutional network to do behavior detection. I design the overall back-end, detection structure and handle concurrent problems.

Pedestrians Detection

This project is from TOSHIBA and I am responsible for optimizing SSD+VGGnet model so that can detect pedestrians in embedded system in real-time. I reference the structure of MobileNet. Through transfer learning and 1x1 CNN kernel with 3x3 kernel, I accelerate the speed of detection without downgrade of precision. In the process, I have deep understanding of VGGnet and various CNN variants, using python and caffe.

Skill List

The followings are skills that I master

- Programming Language: C++/Golang/Python/Java
- Web development：Golang/Python/Vue.js
- Database：SQLite/MySQL/MongoDB
- Machine Learning: Traditional Machine Learning Algorithm/Deep Learning(mainly Computer Vision)/ Tensorflow/Caffe
- Version Control：Git