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JOB OBJECTIVE: C/C++/Python Engineer

Image Processing Engineer

Deep Learning Engineer

Fu Kangwei

Personal Resume

Education Background

2012.9 – 2016.6 **Bachelor of Engineering**, *Nantong University, School of Electronics and Information Engineering*, Integrated Circuits and Integrated Systems.

2016.9 – Now **Master of Engineering**, *Nantong University, School of Electronics and Information Engineering*, Information and Communication Engineering, **First Degree**.

2018.4 – Now **Master of Engineering**, *Tokushima University*, Intelligent Information, **Second Degree**.

Community

Note + Blog https://fukangwei.github.io.

GitHub http://github.com/fukangwei.

Project Experience

2018.9 – 2019.1 **Natural Scene Text Detection System Based on MobileNet v2 and U-Net**.

- Project Description: Do semantic segmentation for natural scene images, and distinguish between text areas and non-text areas.
- Major Duty: Augment the dataset; Design the neural network architecture inspired by MobileNet V2 and U-Net.
- Technology Used: MobileNet v2, U-Net, Data Augmentation, OpenCV, Semantic Segmentation
- Project Results: The complexity of neural network is reduced greatly, and the accuracy is good.

2018.4 – 2018.8 **Dangerous Goods Detection System Based on SSD Neural Network**.

- Project Description: This system which is based on SSD and ResNet can detect the dangerous goods such as knives.
- Major Duty: Modify the neural network architecture of SSD target detection (Replace VGG with ResNet).
- Technology Used: Single Shot MultiBox Detector, Transfer Learning, ResNet, Keras
- Project Results: Dangerous goods in the image can be detected, and the accuracy is higher than the original SSD architecture.

2017.6 – 2017.9	**Facial Expression Recognition System Based on Deep Learning**.

- ○ Project Description: Use Pytorch to build a neural network model used for classifying facial expressions.
- ○ Major Duty: Augment the dataset for solving overfiting, Build convolutional neural network model
- ○ Technology Used: Pytorch, CNN, Data Augmentation, Confusion Matrix
- ○ Project Results: Using the Fer2013 dataset for training, and the classification accuracy can reach to 65%.

2016.1 – 2016.9	**The IOT Application for Agriculture Based on IPv6**.

- ○ Project Description: Build the wireless sensor network based on 6LowPAN, and transmit sensor data by the IPv6 protocol.
- ○ Major Duty: Transplant 6LowPAN code, Write embedding application, Write computer application with QT
- ○ Technology Used: 6LowPAN, QT, Contiki
- ○ Project Results: Build the 6LowPAN wireless sensor network, and the sensors can transmit data by the IPv6 protocol.

2015.3 – 2015.8	**The Design of Autonomous Tracking Ship Based on Beidou Navigation Satellite System**.

- ○ Project Description: The ship realizes the autonomous tracking with Beidou Navigation Satellite System, and sends the location information to the server.
- ○ Major Duty: Write Embedding Application, Write Device Drivers for Beidou and GPRS Module
- ○ Technology Used: STM32, BDS(Beidou Navigation Satellite System), GPRS, PID, Kalman Filter
- ○ Project Results: The ship owns the function of autonomous tracking, and we can track the position of the ship in real time.

Language Skill

Chinese	mother tongue
English	**CET-6** level, Always read English papers, and communicate with teachers using English abroad
Japanese	Study in Japan for one year, and be able to conduct daily communication

Professional Skill

Programing Language	Python > C++ > C > Java > Node.js > HTML > Shell
Tool	Markdown, LaTeX, Github, Hexo, Office
Operation System	GNU/Linux(Ubuntu, CentOS), Windows
Deep Learning	Pytorch > Keras > TensorFlow
Machine Learning	Sklearn
Computer Vision Library	OpenCV
Neural Network model	CNN, FCN, FPN, U-Net, MobileNet, MobileNet V2, VGG, ResNet
Embedding System	80C51, STM32, S3C2440, CC2530, Raspberry Pi
Database	SQLite

Application Framework	QT, Android

Rewards

2015.5	**Undergraduate Group Award for Software Service in College Student Computer Design Competition in Jiangsu**.
2015.6	**The Third Prize of the 14th "Challenge Cup" for College Students' Extracurricular Academic and Scientific Works Competition in Jiangsu**.
2015.8	**The Second Prize of National College Students IOT Design Competition in East China Division**.
2016.5	**The Second Prize of the 11th "China Power Valley Cup" for National College Students Transportation Science and Technology Competition**.
2016.7	**The Team Second Prize of 11th "Huawei Cup" for China Graduate Electronic Design Competition in East China Division**.
2017.7	**The Team Third Prize of 12th "Huawei Cup" for China Graduate Electronic Design Competition in East China Division**.

Personal Interest

Hobby	Research Technology, Collate Notes, Write Blogs, Fix Bugs
Internet	GitHub
Others	Photography, Read Books