Sean C.H. Lin

My current job title is deputy project manager. My first expertise is developing automated test/verify program for wireless technologies. For example: WiFi 802.11 a/b/g/n/ac, BT/BLE, FM/RDS(Radio Data System), GPS and NB-IoT. Enhancing program and optimizing flow are also included. My second expertise is in Bio-ICT field with image process, physiological information process and machine learning. My master thesis is to present a system for measuring heart rate and blood pressure by using off the shelf webcam only.

Software manager · Algorithm developing engineer · Automated program developing engineer · Data analyst · Researcher

Hsinchu, Taiwan
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Personal Information

Name: Chun-Hao Lin
Gender: Male
Birthday: 18/June/1984
Nationality: Taiwanese

Education

National Chiao Tung University, Hsinchu, Taiwan 2013/09 - 2017/09
Institute of Electrical and Control Engineering
Master degree

Feng Chia University, Taichung, Taiwan 2003/09 - 2007/09
Department of Information Engineering and Computer Science
Bachelor degree

Familiar Domains

Wireless Technologies, Automation Verification/Testing, Data Analysis, Bio-ICT, Image Processing, Machine Learning

Professional Skills

Language

Mandarin
Listen(Excellent)
Speak(Excellent)

Developing Tools

Developing Environment:
Windows, Ubuntu, macOS

Read(Excellent)
Write(Excellent)

English
Listen(Good)
Speak(Good)
Read(Excellent)
Write(Excellent)

Computer Language:
1. C/C++ (10 years)
2. Matlab, OpenCV in physiological info. domain (4 years)
3. Qt framework (4 years)
4. Python (2 years)
5. Oracle SQL (1 years)

Experience

1

Distinguished Professor Bing-Fe Wu's CSSP Lab, ECE, NCTU · Master Student · September 2013 - September 2017

1. Image process in BioICT filed.
2. Developing algorithm for using image only to detect vital sign - heart rate.
3. Developing algorithm for using image only to estimate vital sign - blood pressure.
4. Developing program to access and abstract data from open physiological database.
5. Establishing private physiological database.
6. Apply machine learning in physiological info. field.
7. Developing algorithm in Matlab and speed up by rewriting it in C/C++.

2

Azurewave Inc. · Deputy Project Manager · March 2014 - now

1. Developing 1st version program of verification/testing PLC (Power Line Communication) product.
2. Developing program of verification/testing NB-IoT.
3. Co-work with IT and consulting firm to phase in factory 4.0 .
4. Internal source code version control system research/verification/phase in (Git for server and client side both).
5. Reviewing source code, release program and documents.
6. To hold internal training by H/W and S/W demand.

3

Azurewave Inc. · Senior Engineer · March 2011 - February 2014

1. Developing log parser and statistic tool for monitoring product quality.
2. Co-work with test line to build shop floor.
3. Developing program of verification/testing Marvell IoT(Internet of Things) platform.
4. ATE(Automatic Testing Equipment) developing, maintaining and flow optimizing.
5. To join Apple iMac Pro wireless module project. (be responsible for verification and testing part).

4

Azurewave Inc. · Engineer · October 2008 - February 2011

1. Be familiar with DVT-EVT-PVT-MP product develop flow.
2. Developing 1st version program of verification/testing FM/RDS technologies product.
3. Developing 1st version program of verification/testing GPS technology product.
4. Developing program of verification/testing Broadcom WiFi/BT IC.
5. SLT Handler(System Level Test Handler) verification, debugging, phasing in and mass deployment.
6. To join the project of wireless SiP(System in Package) module manufacturing.

Autobiography

My name is Sean Lin and I was born in Ping-Tung, Taiwan. I am 34 years old now. I am a typical Gemini and I have the quality of being adaptable and flexible to handle everything. There are five members in my family. My parents have been

working as a volunteer for charity institution (Tzu Chi).

I got bachelor's degree from Feng Chia University, Taichung, Taiwan on September, 2007. I majored in information engineering and computer science. In this 4 years training I learned that the good software should accompany with suitable hardware to present its value. So I chose “3C technology program” in the end of my sophomore year. The feature of this program is having lots of opportunities to learn the knowledge on both software and hardware. Hardware is for example: MCS-51, Altera MAX FPGA board, Altera Nios FPGA board … etc. This program influenced me to understand and solve the problems from both sides - software and hardware. In a graduation monograph, we focused on the domain of bio-information and we chose “Alternative Spicing between Human, Mouse and Rat” as the research topic. The purpose of this project is to use computer as a tool for the analysis of biodiversity. In this project, firstly, DB2 was used to grab original genes of different species; secondly, Java was used to get genes fragment of different species; thirdly, Perl was used to compare different species genes. By this process, we had further understood about how to research and were more familiar with exist developing tool.

My military service finished on September, 2008. As I remembered, before I moved to a new military unit, I was not quite active and I couldn’t take good care of myself. After one-year military training, I’ve changed a lot and turned out to be more mature. I truly feel that military service provides lots of benefits for me in my whole life.

After 5 years working, there are two options came into my mind. One is changing job, the other is returning to campus for strengthening my professional fields of study. After careful considering, I chose the latter. Thus, I passed the exam of institute of electrical and control engineering, National Chiao Tung University, Hsinchu, Taiwan and asked Distinguished Professor Bing-Fe Wu (http://www.eed.nctu.edu.tw/en/faculty/IEEEFellow/-%E5%90%B3%E7%82%B3%E9%A3%9B-40506175) as my advisor. A new journey begins and I am working and studying master degree at the same time. My master thesis is “Cuffless Image Blood Pressure Monitor by Remote-PPG”. It focuses on developing a system which bases on computer vision to measure blood pressure in real time by using off the shelf webcam only. And the accuracy of blood pressure can achieve British Hypertension Society (BHS) grade C specification. In this research:
1. Developing algorithm in Matlab and speed up by rewriting it in C/C++
2. Grabbing blood pressure data for training/testing model from the largest physiological database – MIMIC II
3. Enhancing accuracy by using transfer learning with open database and private database
4. Using machine learning method to create blood pressure estimation model
5. Designing a real time algorithm for measuring heart rate and estimating blood pressure
6. To Reduce developing time by using computer vision framework: OpenCV and cross platform framework: Qt

It is not easy for me to publish my master thesis causing of the research topic. For me, it is all-new study and I am working and fishing my research at the same time. But I always kept in mind the sentence from my advisor “I would endure hard times in school and walk on air when working rather than be comfortable in school and having bad time in working”. By these four years training, I have second expertise at domain of image process, physiological information process and machine learning.

My current job title is project deputy manager. The main job of my work is co-work with PM, H/W and factory to promote the project to MP. I need to develop a program to control Device Under Test (DUT) and Automatic Test Machine (ATM) at the same time to measure the performance of Radio Frequency (RF). For example, technologies like WiFi 802.11 a/b/g/n/ac, BT/BLE, FM/RDS (Radio Data System), GPS, PLC (Power Line Communication), …etc.
ICs I am familiar with:
1. Cypress(Broadcom) PC/Handset/GPS series IC
2. Marvell Handset/IoT series IC
3. ST-E WiFi/BT/FM/GPS IC
4. Wuqi (start-up company from China) PLC IC
5. HiSilicon Hi2115 NB-IoT IC

Instruments I am good with:
1. LEVEAR(Panasonic) ART-20 (for FM/RDS/Audio quality test)
2. Agilent N4010A (for WiFi a/b/g/n non-signaling test; BT BDR/EDR signaling test)
3. Litepoint IQxel-80/M8/M16 (for WiFi a/b/g/n/ac and BT BDR/EDR/LE non-signaling test)
4. Spirent STR4500 (for GPS test)

5. Anritsu MT8862A (for WiFi signaling test)
6. Keysight Spectrum Analyzer
7. Keysight Network Analyzer
8. Keysight Power Supply and Multi-Meter

Till now, I am familiar with several topics like “the verification/testing of wireless technology, plan and optimization of testing in production, co-work with different job function to promote project, process/analysis/statistic millions of logs, study/verify/phase-in internal source code version control system and source code/program/documents peer review flow”.

The projects impressed me the most in current company are:
1. Join the designing and production of wireless System in Package (SiP) module
Unlike card type module and solder down module, we design different test flow for SiP module. By this, our company got first peak of growing.

2. Join the verification/phase-in/mass deployment of System Level Test (SLT) hander
Our test line keeps minimum operator due to SLT handler. By this, we have less cost in testing than other companies. This is also the main reason why our company can be built in Shanghai, China.

3. Join the design/pilot run/mass production of Apple iMac Pro wireless module
Cause of the characteristics of this customer, we are more familiar with the flow of DfM (Design of Manufacture), verification and production.

4. Own the project of verification/phase in/internal training of source code version control system
Before phasing in tools, our company kept source code in the way of insecurity of storing, inefficiency of sharing. By this experience I learned that if the goal is good for company in the long term, it should be achieved and no matter how hard it is.

My strength is that I am active in the pursuit of excellence, which makes me never stop learning. And when encountering problems, I will find all kinds of resources to solve them. Therefore, I am confident that I will be an excellent candidate for this position and make great contribution to our company.

References

Name: Professor Bing-Fe Wu
Department: Institute of electrical and control engineering, National Chiao Tung University, Hsinchu, Taiwan
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