Chun-Min Chang

Software Engineer

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Experience

Firefox OS TV: Remote Control

- Build a remote-controller on Firefox Android to connect Firefox OS TV via a secure channel(J-PAKE over TLS)
- Integrate with W3C Presentation API

Firefox OS: Physical Keyboard

- Design an architecture for routing hardware keyboard signals to input-method-editor
- Enable the capability to simulate the hardware event in one of our testing framework

Firefox OS: Processes Management

- Manage lifetime of applications' processes
- Manage the applications' permissions

Full-Stack Web Development

- Build a student course-selection website and a dating website. The later reached 50000+ members in two months. Both two were reported by TV, newspaper, and magazine.
- Build a sensor data collecting server for research.

IoT Localization / M2M Tracking / Sensor Fusion

Develop a math model to estimate the position of persons or machines by processing the inertial sensor data and a known map, without any infrastructure like GPS or WiFi. The math model is improved by *Particle Filtering*(a.k.a *Sequential Monte Carlo*), and it can be scaled by any new sensor.

Embedded System / Firmware / iOS Programming

- Write drivers for peripheral interface(UART, SPI, I^2C) and various sensors
- Develop BLE Application on EcoBT(based on TI CC2540)
- Develop iOS app for receiving sensor data

Education

Master's degree, Computer Science

National Tsing-Hua University, Taiwan 2012-2014, Embedded Platform Lab, **Thesis**: *Cooperative Tracking using Encounter Information by Particle Filtering* (advised by Prof. Pai H.Chou)

Bachelor's degree, Computer Science

National Tsing-Hua University, Taiwan 2008-2012, **Third Prize**, Computer Science Senior Project Contest: ThirdEye - Remote-controllable WiFi webcam car

Summary

Knowledge from hardware to software with mathematical skills to research, analyze, solve problems and complete projects. Independent worker with high energy and good communication skills to collaborate in team.

Career Objective

A professional software engineer with scientific background knowledge to invent and innovate technology to improve human life.

Additional Info

I have a busking permit for singing and playing guitar on the streets. I hate suits and I like jeans.