Chun-Min Chang

Software Engineer

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Experience

Firefox OS TV: Remote Control

- Develop remote-control service on Firefox OS TV.
- Build a remote-controller on Firefox Android to operate Firefox OS TV via a secure channel.
- Introduce J-PAKE over TLS for secure connection.

Firefox OS: Physical Keyboard

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

Firefox OS: Processes Management

- Manage lifetime of application 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 server to collect sensor data for research.

IoT Localization / M2M Tracking / Sensor Fusion

Build a math model to estimate the position of persons/devices by calculating the inertial sensor data and a known map, without any infrastructure like GPS or WiFi. The model is a variant of *Particle Filtering* (*Sequential Monte Carlo*), thus it can be scaled for any new type of sensor data.

Embedded System / Firmware / iOS Programming

- Write drivers for peripheral interface(UART, SPI, I²C) 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.