

Chun-Min Chang

Software Engineer



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EXPERIENCE

Firefox: Multiple channel for Audio

- Implement 5.1, 7.1 surround sounds support in Firefox
- Design mixing mechanism to convert audio data
- Enable tests for multiple channel and audio mixing

Firefox: Device selection UI on mobile and desktop

- Build device selection UI when connecting to Presentation API devices(e.g. Chromecast)
- Implement backend browser API for UI modules

Firefox OS TV: Remote Control from Android to TV

- Build remote-control service on Firefox OS TV
- Design a panel on Firefox Android to control TV
- Introduce J-PAKE over TLS to establish a secure connection channel

Firefox OS Feature Phone: Physical Keyboard

- Design an architecture to route hardware keyboard signals to input-method-editor
- Enable simulation of the hardware events in testing framework

Firefox OS: Processes Management

- Manage lifetime and permissions of the processes
- Enable permission configuration in testing framework

Full-Stack Web Development

- Develop web services to give suggestions about course selections for students
- Build online dating services to pair people with similar interests

IoT Localization: Particle Filter for Data Assimilation

- Build a math model to estimate the devices' location by calculating the inertial sensor data and a known map, without any infrastructure like GPS or WiFi
- Build a server to collect sensor data

Sensor Network: SoC Firmware and iOS App

- Write drivers for peripheral interfaces(UART, SPI, I²C) to read data from various sensors on TI CC2540
- Build an iPhone app to receive sensor data via Bluetooth 4.0

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. Self-motivated character 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.