Shengrong Yin

syin@cs.uh.edu http://syin.us
832-274-1519 Houston, TX 77081

Objective

An internship position which can utilize my programming and computer skills.

Programming Experience

Embedded Systems

Experience with C on TI MSP430, AVR, and ARM architectures for control and signal processing purposes. Experience with Arduino, Raspberry Pi, BeagleBone, OpenWRT, TinyOS, Contiki

Wireless Communication

Experience with protocol design and radio stack implementation for wireless communication systems. Proficiency with data collection in wireless sensor networks. Proficiency in signal processing, synthesis and analysis programs developed in Python and Matlab.

Related Projects

Wireless AP Integrated with Multiple Sensors

Co-developed a data acquisition system with multiple chemical sensors using Raspberry Pi. 2015

802.11 to 802.15.4 Communication System

Designed and implemented a WiFi to IEEE 802.15.4 sensor nodes communication system based on OpenWRT and TinyOS without using a gateway. 2015

BeagleBone Cape for VLC

Created a BeagleBone Cape for a visual light communication system. 2015

Wearable Device Prototyping for Data Collection

Designed and implemented a wearable device for dancers to capture and synchronize they dancing performance with acceleration data. 2015

Dual Band Wireless Connectivity Measurement

Developed a system for dual band wireless sensor network to procure and analyze the wireless connectivity simultaneously. 2014

Dual Band WSN Testbed Design and Deployment

Built and debugged a distributed system for wireless sensor network testbed with servers, proxies and sensor nodes utilizing Python, Shell scripts based on Ubuntu 13.04; Validated and enabled a wireless sensor network testbed - Twonet to make it public for the public usage. 2014

US Government Shutdown 2013

Investigated how soon US government can update their websites during the shutdown event using Shell and Python scripts; Submitted research report and accepted by slashdot.org. 2013

TelosC Platform for TinyOS

Created a new platform with MSP430 and CC1101 for TinyOS. Implemented CC1101 radio stack which can be ported into TinyOS. 2011

Wireless Irrigation System

Designed and implemented a wireless irrigation system with 8051 and nRF2401 to better precise the water-saving agriculture. 2010

Education

University of Houston, Houston, TX

Ph.D. student in Computer Science. Advisor: Prof. Omprakash Gnawali. 2013-present

Wuhan University of Technology, Wuhan, China

Masters (2013) and Bachelors (2011) in Electrical Engineering.

Employment

IBM

Designed and implemented automated and manual test cases for the deployment of IBM cloud services using IBM Rational Application Developer and bash scripts. 2013

Teaching

COSC 1410, 1320, 1304, 6377

Lab assistant with C/C++ Programming and computer networks. 2013-2015

Publications

IEEE MASS 2014

"Multi Channel Performance of Dual Band Low Power Wireless Network"

"Poster Abstract: Concurrent Wireless Channel Survey on Dual Band Sensor Network Testbed"

Patents

CN102322857B(granted)

"Position and posture measuring system and method for mechanical equipment", designed and implemented an adaptive navigating system for road header underground using C/C++. 2011

Awards

Student Travel Grant Award for ACM SenSys 2014, IEEE MASS 2014 2014

National Scholarship for Masters in China (TOP 1%) 2012

Outstanding Graduates of Class 2011 at WUT (TOP 5%) 2011

Affiliation

Student member of IEEE 2014

Vice-Chairman of the Radio Station at WUT 2010

Service

ACM IPSN 2015, shadow PC member