Yoshinobu Tanno *August 17, 2015*

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**Summary**

In Aizu University, I work as research assistant after I majored in computer science and engineering software department and I acquired a master. At the age of a master, I proposed and created the prototype system controlled the power supply of the machine with a depth sensor. So I experienced knowledge of the hardware.

After master graduation, I developed the sensor network and hardware for stereo camera. Not only I developed, but also I performed the lecture of the program to the student of the laboratory and I build the support system for beginners with the tool kits.

**Research Experience**

Creating sensor network, 3d printer fabrication, image processing assistant tools and so on. Also I lectured programming to student or created prototype hardware for exhibition.

The University of Aizu Fukushima, Japan

**Research Assistant** Apr 2012-present

* Manufacturing inverted pendulum with Arduino and gyro sensor.
* Controlling ArDrone2.0 with ARDrone-Control-.NET.
* Helping to build web page for viewing sensor information with PHP in Visual Studio and Eclipse.
* Rewriting program language in C# from FORTRAN about An artificial neural network (ANN) and genetic algorithm (GA) approach.
* Creating investment supporting tools with server and client system.
* Creating image cutting tools with OPEN SOURCE COMPUTER VISON LIBRARY (OPENCV).
* Creating file share system prototype with FILESYSTEM IN USERSPACE (FUSE).
* Developing a robot which is controlled with Proportional-Integral (PI) control operated by Matlab and Simulink.
* Creating stereo camera frame with 3d printer.
* Controlling camera moving with face point from Kinect.
* Creating sensor network in lab with Arduino and temperature sensor.
* Controlling power switch of electrical appliances via network for a master’s thesis.
* Building application to manage digital document for graduate thesis.
* Experiencing teaching assistant computer literacy and C programming for two years.
* Creating book sample of IPhone application with Objective-C.
* Displaying image in VGA with evaluation version of FPGA (Xilinx).
* Creating led timer with evaluation version of FPGA (Altera).
* Hacking Lego with Not eXactly C (NXC).
* Detecting motion object with Kinect.
* Creating logger of visual field and brain wave with USB camera and sensor.
* Manufacturing automatic water winding machine with the refueling pump.
* Creating augmented reality (AR) named card.
* Creating data gloves with bending sensor for virtual keyboard evaluation.
* Creating virtual desktop viewer with AR marker.
* Creating logger of movement with ZigBee and GPS sensor.

The above works and other is my home page <http://ytanno.herokuapp.com/>

**Teaching Experience**

I taught students of the laboratory 13 times. I taught about program of C#, PHP, Python and way of setting development environment and way of access sensor (USB camera and Kinect) and basic knowledge of image processing and way of access image data.

**Skills**

**Programming:**

C/C++/C#/Java/Python/Ruby/Ruby on Rails/PHP/javascript/Objective-C/R/NXC/TypeScript/HTML/PowerShell/MySQL

**Software:**

Autodesk/Openframeworks/Processing/Matlab/Simulink/Excel (VBA)/Wireshark/VisualStudio/Eclipse/FFmpeg/Unity/Emacs/Vim/HiRDB/MongoDB/SQLServer/IIS/Xampp

**Hardware:**

Special Camera (Bumblebee2, EVI-D100, AI-Ball), Depth Camera (Kinect, Xtion Pro Live), Microcomputer board (Arduino, PandaBoard, SakuraBoard), FPGA (Xilinx, Altera), Robot (ArDrone, Roomba, Lego), Microcomputer board add-in sensor (GPS, Temperature, Gyro, Acceleration, Infrared, Humidity, Illuminance, Bending), Other (Leap Motion Controller, iPod, MindTune, AirPcap)

**Handicraft:** Measuring/Designing/Modeling

**Machinery:** Soldering iron/3D printer/

**Natural Language:** Japanese (native)

**Others:**

Image Recognition/Sensor Network/Clustering/Argument Reality/Computer Vison/Windows API/RS232C (between PC and Special Camera)/ZigBee (between PC and Arduino)/IEEE1394 (between PC and Special Camera)/k-means

**ACADEMIC QUALIFICATIONS**

The University of Aizu Fukushima, Japan

**Master of Computer System**  *Apr 2010-Mar 2012*

The University of Aizu Fukushima, Japan

**B.S. in Computer Software** *Apr 2005-Mar 2010*