Mintra Ruensuk

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What is your research question for your PhD?
TBD

What research have you done in the past?
I have received Master Degree in Computer Science (Software Engineering) in 2012 from Asian Institute of Technology, under the supervision of Dr. Matthew Dailey. I have researched about Human Robot Interactive in service environment and came out with the thesis entitled "*Voice, Gesture, and Web Interfaces for Human Robot Interaction in Service Environments.*" I studied the interaction between robot and human being throughout voice, gesture, and Web Interfaces with Turtlebot (an iRobot Create integrated with a Microsoft Kinect). My research focused on the development of interfaces in order to facilitate non-experience user to simply control the robot.

Robot Operating System (ROS) is used as a framework which can obtain, build, write, and run code across multiple computers and multiple robots. Moreover, the ROS package was created on top of ROS to receive commands from user such as voice command, and finger command in term of gesture. From three interfaces, they are all satisfied with qualitative evaluation as Turtlebot can achieve correct destination and respond to the command in a timely manner. In term of user aspect, web-based system is most satisfied as it is convenience to user (drag and drop) and can provide related information on web page such as robot position, obstacles, inflated obstacles, laser scan, and a compressed video coming from Microsoft Kinect.

Before my thesis study, 2011, I have studied the Kinect technology to understand the definition of gesture recognition and gesture tracking. It was enable me to develop the program that allows user to interact with Kinect. With this program user can draws any shape they want, but I expected them to draw shapes within rectangle, circle, and even triangle. The contour is used to synthesize whether the shape is. Then, the result of hand tracking would be performed to the user.

The research that I have been conducted during the past three years is contributed not only to my master degree but it is also meaningful to other researchers. As a result, I have a passion to pursue my higher education in a broad area of human interface technology. To fulfill my long term future as a university lecturer, or a researcher in Thailand.

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Nationality

Citizen of Thailand

Gender

Female

Education

Asian Institute of Technology **Thailand**
M.Sc, Computer Science (Specialize in Software Engineering), 3.28 *2010 – 2012*

Mahanakorn University of Technology **Thailand**
B.Sc, Information Technology (First Class Honors), 3.93 *2005–2009*
Senior project: Information Technology Jobs Matching By Groovy on Grails

Master thesis

title: *Voice, Gesture, and Web Interfaces for Human-Robot Interaction in Service Environments*

supervisors: Matthew Dailey, PhD

description: Robot Operating System (ROS) is used to enable Human-robot interaction with the Turtlebot (an iRobot Create integrated with a Microsoft Kinect). Building on and extending existing technologies, I have created a prototype restuarant waiter robot able to respond to voice, gesture, and Web-based commands. Available online at `https://sites.google.com/site/vgwhri/home`

Interests

Human-computer interaction:

Human-robot interaction:

Agile software development:

Web and mobile technology:

Object-oriented technology:

Experience

Vocational

Think Blue Data **Bangkok, Thailand**
Software Engineer *2012–present*
Responsible for developing Web applications using `Ruby on Rails`. One of the applications is an online tool for planning and analyzing data and images generated by a portable water robot named ESP. It enables user to plan a mission before deployments, remote troubleshooting, sync data generated from ESPs to dedicated server, and process log files and images. After analyzed large dataset, an online tool will generate the visualizations which allow user to interact, filter and export. Moreover, this application is extended to serve user the visualizations of big data generated by water sensors around the world. We also develop interactive E-learning applications which provide classroom data in real-time. User can manage course's data such as lessons, learning materials, quizzes, and etc using Web-based interace.

The technologies behind these applications are `Ruby on Rails`, `Node.js`, `JavaScript`, and `Bootstrap`. We mainly use open-source libraries of JavaScript such as `jQuery`, `underscore.js`, `slickgrid`, `backbone`, `d3`, `nvd3`. Another technologies we have been using are `Rsync`, `Drupal` and `Apache Solr`.

Our team is using Agile software development. We deliver product to customer every 2 weeks. We mainly use XP, scrum process. After each iteration has finished, we have one day for researching everything we are interested in. It's a Hack Day. I have been researching various topics during my Hack Day such as play around with testing methodology tools, generated diagram, how to test rake task, play around with Bamboo, Hadoop, learning cloud architecture.

Personally, I have been using `Pomodoro Technique`. It helps me to manage the internal/external interruptions, so that I can see myself more hyper productive.

Mahanakorn University of Technology **Bangkok, Thailand**
Lecturer *2009–2010*
Department of Information Science and Technology,
Teaching Course: Modern Programming Language.
Co-Teaching Courses: Computer Graphic, Computer Network, Multimedia and animation technology, Data structure and algorithms, and Design Patterns.

Miscellaneous

Thanyarat School **Pathum Thani, Thailand**
Speaker *2014*
Encourage high school students to learn more in computer science, also give them the inspirations in order to achive their dreams.

High Schools **Thailand**
Speaker *2010*
I had travelled around Thailand to encourage high school students for further study in their field especially in computer science. I mostly talked about the guideline to study in the university.

Honors, Awards, Grants

Asian Institute of Technology **Pathum Thani, Thailand**
Royal Thai Government Scholarship *2010-2012*

Mahanakorn University of Technology **Bangkok, Thailand**
Full Scholarship for outstanding students *2005-2009*

Certificates

Sun certified programmer for the Java platform, standard edition 5.0

Publications

Ruensuk, M., Information Technology Jobs Matching By Groovy on Grails. In Proceedings of *Conference on Electrical Engineering/Electronics Computer Telecommunications and Information Technology (ECTI-CARD)*, 2010, pp. 343 - 348.

Languages

Language 1: Skill level *Comment*

Language 2: Skill level *Comment*

Language 3: Skill level *Comment*

Computer skills

category 1: XXX, YYY, ZZZ

category 2: XXX, YYY, ZZZ

category 3: XXX, YYY, ZZZ

category 4: XXX, YYY, ZZZ

category 5: XXX, YYY, ZZZ

category 6: XXX, YYY, ZZZ

Extra 1

- Item 1
- Item 2
- Item 3. This item is particularly long and therefore normally spans over several lines. Did you notice the indentation when the line wraps?

Extra 2

- Item 1
- Item 2
- Item 3
- Item 4
- Item 5[**?**]
- Item 6. Like item 3 in the single column list before, this item is particularly long to wrap over several lines.

References

Category 1

- Person 1
- Person 2
- Person 3

Category 2

Amongst others:

- Person 1, and
- Person 2

(more upon request)

All the rest & some more

That person, and **those** also (all available upon request).