



# Android-NXT Robotics Programming Day Camp

**Dates:** Monday, July 18 ~ Tue., 19, 2011

**Time:** 9 am – 4 pm

**Location:** Lawrence Technological University, Southfield, Buell Management Bld., M210 (July 18) and M218 (July 19)

**Instructors:**

- Dr. CJ Chung (Associate professor of Computer Science, Founder and Director of Robofest, [chung@ltu.edu](mailto:chung@ltu.edu))
- Jon Nabozny, Robotics Lab Assistant
- Taiga Sato, Robotics Lab Assistant

**Objectives**

- To learn basic Android mobile app programming with Java; Android sensor/Bluetooth programming
- To learn basic concepts in autonomous robotics, image processing and computer vision

**Tentative Topics & Schedule**

Date	Time	Topics	Instructors
July 18	9~10am	Check-in; Introduction to Android development	Chung
	10~11am	Setup & installations for Android programming Running apps on a real phone	Nabozny and Chung
	11~noon	Android programming basics	Chung
	Noon~1pm	Lunch provided by Lawrence Tech Robofest	
	1pm~4pm	Android graphics Treads and Timers Capturing a single image using Android Camera class	Chung, Nabozny, and Sato
July 19	9am~noon	Single Image processing Vision processing: Color to B/W Introduction to LeJos NXT programming Bluetooth programming Android – NXT	Chung & Sato
	Noon~1pm	Lunch provided by Lawrence Tech Robofest	
	1:00~2:00pm	Android UI to control NXT robot via Bluetooth	Nabozny & Chung
	2:00~2:30pm	Go forward until white paper on the floor is detected	Sato & Chung
	2:30~4:00pm	NXT line following using Android phone camera NXT line following while stopping at red color	Sato & Chung

**Pre-requisites (Eligibility)**

- For high school students who might be interested in learning more computer science.
- Some programming knowledge and experience required.

**Benefits**

- Participants will be able to study for Computer Science AP exam in Java
- Participants will be able to develop various Android apps

*This camp is partly sponsored by TARDEC*