



L2Bot Robotics Programming Day Camp

Dates: Tuesday, June 28 ~ Wed., 29, 2011

Time: 9 am – 4 pm

Location: Lawrence Technological University, Southfield
Buell Management Bld., M218

Instructors:

Dr. CJ Chung (Associate professor of Computer Science,
Founder and Director of Robofest, chung@ltu.edu)
Jon Nabozny, Robotics Lab Assistant
Noah Crocker, Robotics Lab Assistant

Objectives

- To learn basic concepts in autonomous robotics, control, image processing and computer vision
- To learn object-oriented Java programming language using Eclipse IDE

Program Contents and Tentative Schedule

Date	Time	Topics	Instructors
June 28	9~10am	Check-in; Introduction and Robotics 101	Chung
	10~11am	Setup and installations for L2Bot programming	Nabozny and Chung
	11~noon	Java GUI programming with Swing Introduction to L2Bot with Java programming Intro. to JMF and how to use USB Webcams with Java	Chung and Nabozny
	Noon~1pm	Lunch at atrium provided by Lawrence Tech	
	1pm~4pm	Introduction to javax.comm API and how to control motors with Java through serial port Introduction to image processing and computer vision Robot Vision Programming (1)	Nabozny and Chung
June 29	9am~noon	Robot Vision Programming (2) Line following with L2Bot vision	Nabozny and Chung
	Noon~1pm	Lunch at atrium provided by Lawrence Tech	
	1pm~3pm	Blob and color detection algorithms	Crocker and Chung
	3pm~4pm	Mini Competition	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 computer vision applications
- Participants may borrow an L2Bot after the camp for free if they plan to compete in Vision Centric Challenge during the Robofest 2012 season (www.robofest.net)

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