Announcement for a joint interdisciplinary independent study course between ECSE, CS, and Cognitive Science:

Aibo Greeters

Sony Aibo ERS-7M2 is the latest of Sony’s entertainment robots. It is also a viable platform for robotics research. The ERS-7 runs on a 576Mhz 64-bit processor. It is equipped with distance sensors in its snout and chest, head touch, back touch, chin and paw sensors, an acceleration sensor, and a vibration sensor. It also has a camera, microphone, speakers, voice synthesizer, and wireless 802.11b LAN communication. Movable joints include: head (3 DOF), mouth (1 DOF), leg: (3 DOF x 4 legs), ear: (1 DOF x 2 ears), tail: (2 DOF). Aibo comes with Sony’s interface program to allow interaction and communication directly or through the wireless link. Sony also makes available the OPEN-R software development environment (openr.aibo.com) to allow direct high level programming of Aibo’s functionalities. A popular enhancement of OPEN-R, called Tekkotsu (www.cs.cmu.edu/~tekkotsu), has been developed by the Carnegie Mellon University to facilitate Aibo programming. There has also been further extension to the MATLAB interface etc.

We are looking for Junior or Senior level students with interest/background/fervor in robotics and programming to conduct independent studies (ECSE/PSYC/PHIL 4940, 3 credits) based on the Aibo. The goal of this study to pair students from ECSE/CS and Cognitive Science to develop Aibo greeters that can recognize visitors (e.g., those standing still at a certain spot), greet them, ask helpful questions, offer assistance (e.g., guidance to the conference room), and return to the greeting area. CS students would have preferably taken CSCI-2300 Data Structures and Algorithms. ECSE students would have preferably taken ENGR-2350 Embedded Control. Cognitive Science students would have preferably taken PHIL/PSYC 2965 Introduction to Cognitive Science. Other relevant courses or background is a plus.

Interested students should email a short message about your interest and qualifications for this project and include a 1 page resume including GPA, key courses taken so far, programming ability, etc. to Professor John T. Wen wenj@rpi.edu (for ECSE/CS students) or Professor Bram van Heuveln heuveb@rpi.edu (for Cognitive Science students).