

POSITION AVAILABLE

Center for Biological & Computational Learning, E25-201
Dept. of Brain & Cognitive Sciences, MIT

Position: Oxygen Fellowship for UROP/Masters/PhD position

Project Title: "A Vision System for Surveillance (*Intelligent Visual Surveillance Technology*)"

Description: In the past few years we have made significant progress in developing a new technology for supervised learning and in using it as the core of several real-time vision and perception systems: people and face detection in complex images estimation of facial expressions face identification. We now want to extend substantially our existing technology to build modules that together should be capable of elementary *scene understanding* by training a small dictionary of classifiers for different types of objects and of actions. In particular, we want to detect, categorize and localize a small number of key visual "things": people, telephones, desks, doors, elevators, stairs, windows; recognize visually a small number of human activities, such as walking, running, sitting, waving, drinking and speaking; continue our work on viseme recognition and combine it with speech recognition systems to give them more robustness against noise;

Requirements: The applicant must know Matlab and Visual C++ well; experience with numeric programming is also useful. To work on this project, he/she needs to have experience with machine vision and machine learning. (This project is suitable for an advanced undergraduate, master or beginning Ph.D. student.)

Start Time: As soon as possible.

Duration: 1/1/02-12/31/03

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