CS 795/895 Intelligent Internet Databases

Syllabus
Spring 2006
Dr. Stewart Shen
Office hours: Mon. & Tue. 10am-12noon, Thu. 3pm-5pm

Prerequisites
- CS 418/518 Web Programming
- or
- CS 419/519 Internet Databases

Objectives
- Internet today and in the near future
- In the research spirit, learning
  - What have been done
  - How current works are done
  - What may be done in the near future
  - How may achieve the future
  - (Not a programming course)
- Write a research paper or implement a project

- Various forefront systems
- Web agents
  - Examples
  - Key technologies, issues, and standards for web agents
- Web services
  - Technology
  - Examples
    - Financial
    - News
    - Others

- Semantic Web technology
  Semantic Web is a collaborative effort led by W3C with participation from a large number of researchers and industrial partners.
  - XML
  - XML Schema
  - RDF
  - RDF Schema
  - OIL
  - Ontologies

- Advanced DB technologies
- Other research topics
Texts and references

Professional papers from various sources
Some will be provided

- G. Antoniou, F. van Harmelen
  A semantic Web Primer
- E. Berino, B. Catania, G. P. Zarri
  Intelligent Database Systems

Additional reference books
- Joseph Bigus and Jennifer Bigus
  Constructing Intelligent Agents Using Java
- Mark Watson
  Intelligent JAVA Applications for the Internet and Intranets
  Morgan Kaufmann, 1997. ISBN 1558604200
- Gerhard Weiss (eds.)
  Multiagent Systems
- M. Huhns and M. Singh (eds.)
  Readings in Agents

Major Web Reference Sites

- UMBC AgentWeb
  http://agents.umbc.edu/
- The Agent Oriented Software Group
  Intelligent reasoning in Robot Vehicle

- The Blackboard Technology
  Blackboard and agent-based collaborative-integration solutions for engineering, manufacturing, business, etc.
- The CodeBaby
  An intelligent interface for internet content
  http://www.codebaby.com/media/Letus_Demo.mov

Course Requirements

- Class participation
  Including presentation (20%)
- Term project / research paper (40%)
- Exams
  In-class mid-term (20%)
  Take-home final (20%)