

# CAP5512 : Final Project

*Due Dates:*

*February 27, 2007 (Proposal presentation)*

*March 20, 2007 (Update presentation)*

*April 10, 2007 (Final project write-up and presentation)*

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## 1 Objective

The primary goal of this assignment is to successfully carry out a student-selected research project in evolutionary computation. The project involves proposing, implementing, writing-up as a paper, and presenting to the class your work.

## 2 Preliminaries

Throughout the class you will work on a final research project. Before the middle of the course each student proposes an individual project. The proposed ideas are discussed in one or more individual meetings and one particular project is agreed upon between the instructor and the student. During the second half of the course, the student carries out the agreed project. The student writes up his/her work in a 8 to 10 pages paper in the style of a conference paper. For instance you can use GECCO 2007 style:

<http://www.sigevo.org/gecco-2007/papers.html>; or

<http://www.acm.org/sigs/pubs/proceed/template.html>.

Towards the end of the semester all students will be ask to present their project to the class. The project due date, students must bring three extra copies of their project to be distributed to other three students to be anonymously peer reviewed. The last day of classes all students must bring their written reviews. Your final project grade will be partially based on the peer reviews of your work and the reviews that you write about other students projects. All projects will be compiled into a class book and published as an EECS Technical Report and also in the class

website. Copies of this book will be distributed to all students. This final research project is worth 40

## **3 Project Milestones**

### **3.1 Topic Selection**

The topic of your final project is student-selected. In the next two weeks schedule one or more individual meetings to discuss proposed ideas and agree on a project.

### **3.2 Proposal Presentation**

You are expected to present your proposed research to the class. The presentation will be 8 to 10 minutes and only 5 slides:

1. The research problem: explain what is the problem you are trying to solve and why is relevant.
2. Previous work on the problem (at least 3 references)
3. Your approach to solve the problem
4. The methodology you plan to use
5. Timeline

### **3.3 Final Project Update Presentation**

On this presentation you will update the class on your progress in 8 to 10 minutes.

### **3.4 Final Project Write-up and Presentation**

This is the final project presentation. You will have 30 minutes to present your research project results.

## **4 Timeline**

- February 27, 2007: Proposal presentation

- March 20, 2007: Update presentation
- April 10, 2007: Final project write-up and presentation

## 5 Deliverables

- write-up describing your project in a conference style format (4 hard copies and a pdf file).
- all code you write for the project
- presentations: proposal (8 minutes), update (8 minutes), and final (30 minutes).

## 6 Evaluation

Your grade will be determined by your write-up and presentations. Also, it will be partially due to the feedback from your peers (other students). The questions below are typical for a peer-reviewed conference. You will use the same guidelines to evaluate the final project of your peers.

### 1. GOALS AND CONTRIBUTIONS

- Are the research goals and contributions of this work clearly stated?
- Do the contributions meet the goals?
- How important are the contributions of this paper?

### 2. PRESENTATION

- Is the paper well organized and well written?
- Does it use standard terminology?
- Does the paper describe problems and solution methods in sufficient detail for readers to replicate the work?
- Are there sections of the paper that need further elaboration or sections that can be reduced?

### 3. EVALUATION

- Is the approach evaluated carefully enough?
- Does the paper include systematic experiments, a careful theoretical analysis, or give evidence of generality?

- If the experiments are not adequate for supporting the claims, what additional experiments do you suggest be added to meet the goals?

#### 4. REFERENCES

- Does the paper discuss relevant earlier work, noting similarities, differences and progress?
- Does it give proper credit to other contributions to the field?

#### 5. DISCUSSION

- Does it discuss the limitations of the approach as well as its advantages?
- Does it consider the implication of the work and outline directions for future work?

#### 6. GENERAL

- Does the paper make a significant, technically sound contribution to its field?
- Do you wish to nominate this manuscript for the best paper award?

#### 7. RECOMMENDATION (please choose one)

- Accept
- Accept with minor revisions
- Accept with major revisions
- Reject and recommend full revision and resubmission
- Reject