

Course Project Proposal

CSCI-4290/6290: Robot Motion Planning

Due: Friday, November 11, 2005

Your project proposal should clearly identify and state the topic you will work on for the course project. You will receive feedback on the appropriateness and scope of the project you propose. Course projects must be done individually. The typical project should involve the implementation of a path planning system to bring a robot from an initial configuration to a goal configuration along a continuous, collision-free path.

Your project proposal should:

1. Outline the problem you plan to work on for the project and identify the motion planning techniques required for your project.
2. State the type of robot model (2D polygonal or 3D polyhedral, single rigid body, or multiple bodies), the type of motion model (holonomic, nonholonomic, dynamical), the collision detection method, and the motion planning algorithm(s) you will use.
3. Describe what you expect to deliver as the final project, and the programming language you will use. **Your code must run on the FreeBSD machines in the Amos Eaton labs.** In addition to your code, the final project must include a written summary of your work and a web page illustrating your results for a few interesting examples.

Evaluation of appropriateness depends on the motion planning techniques you will use, and what you are likely to learn from the project. You are encouraged to discuss possible project choices with the instructor in advance, especially if you wish to propose something unusual.

Your project proposal should be a brief document, one or two pages in length, and must be written using a computer. The proposal is due on **November 11, 2005** at the beginning of class. The final course project and accompanying project web page are due on December 5, 2005.