THE UNIVERSITY OF TEXAS AT DALLAS

Introduction to Computer Vision
Project Proposal

CS 4391 Introduction to Computer Vision
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Department of Computer Science

Project Types

Explore a computer vision topic in one of two different ways

- **Research-oriented**
  - (1) Propose a new idea that has not been explored before in the literature
  - (2) Implement the new idea and conduct experiments to verify it

- **Application-oriented**
  - Apply an existing computer vision algorithm or method to a new problem or a new application. For example, if a method is proposed for domain A, the project can explore applying the method to domain B where different data are collected

Evaluation

For project evaluation, the two categories will be considered equally

A project will be evaluated according to its quality in terms of implementation, experiments, presentation, and writing

Collecting real-world data for testing is highly encouraged

Proposal Format

Title: Project name

Team Members: Names of the team members as the authors in the proposal

Problem Statement: Describe what the problem you are trying to solve in this project is

Approach: Describe your idea is to solve the problem. It is fine if some details have not been figured out. But students should have rough ideas on how to proceed

- State which category the project is in research-oriented or application-oriented
  - For research-oriented projects, describe the proposed idea and the novelty of the idea
  - For application-oriented projects, describe which approach is going to be used and how to apply this approach to a new application

Proposal Format (cont'd)

Data: Describe what dataset the project is going to use.

- Students can use existing datasets for experiments, collect your own datasets, or even test the method with the real-time data stream from a camera

Evaluation: Describe how to evaluate the success of the project.

- For example, what evaluation metrics will be used to evaluate the performance of the method?

References: Cite related works in the proposal!

Topics

Based on the materials we cover in our lectures, we suggested several topics for the course project (see our Proposal Description)

However, the scope of the project is not limited to the mentioned topics in the project proposal description

- Students can explore other topics in computer vision as well
- Also, the references in the suggested topics are recent representative works. Students can explore methods beyond these references and propose new ideas for different topics

Groups

https://docs.google.com/spreadsheets/d/1z17OMpJWUkSXjfiV-CJA0hoUk5BsgmYHNDMNe6q4sZw/edit?usp=sharing

Sheet 1: Please first register your team in this sheet, and then register on your eLearning groups

Sheet 2: If you are looking for team members, please provide a brief introduction to your project and your contact information in this sheet.