



The University of Texas at Austin
Electrical and Computer
Engineering
Cockrell School of Engineering

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INTRODUCTION TO COMPUTER VISION

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Project Overview

- **Final Project: 50%**
 - Proposal (**10%**) Due by the end of **Week 8 (10/16 Sunday)**: **2-Page** report, including project title, team member, problem description, preliminary literature survey, the proposed technical plan, and references
 - Presentation (**10%**): Be prepared to be challenged by your peers and the instructor
 - Time TBD, usually in the last week of semester, before the final exam week
 - Code review (**10%**): Write clean, well-documented and runnable codes, PLEASE
 - Final Report (**20%**): **(8+1)-page** report following the standard CVPR paper template (and quality level)
 - **Template file:** <http://cvpr2020.thecvf.com/sites/default/files/2019-09/cvpr2020AuthorKit.zip>

Project Guidance

- **Teaming:** we encourage 4 students to form a team, as you are expected to carry on a semester-long research project with substantial innovations.
 - You are encouraged to use the slack channel “*project_team*” to recruit teammates
- Each project team has to be registered to and approved by the instructor, by the end of **Week 8 (10/16 Sunday)**.
 - A Google Sheet will be provided then for team registration
 - You will also need to identify a tentative topic
- **Topic:** your choice, but must be relevant to computer vision
 - What if I don’t have a specific idea now? Talk to the instructor & the TAs...
- **Extra credits** will be given to:
 - One project to receive the Best Project Award, *voted by all class members* (+5%)
 - Projects in **interdisciplinary domains** (some examples: 6G communication, brain-computer interface, economics & markets, COVID-19, etc.), *judged by the instructor* (+2%)

How to Develop Good Project Timeline

- There is no weekly checkpoint, but pay attention to your own timeline
- **First things first:** conduct a thorough literature survey to avoid reinventing wheels, and then discuss with the instructor
- Don't delay yourself until last minute. The project should be scheduled and justified as **one full semester long**: it should NOT be something that you can rush in a day or two!
- Discuss and divide task assignments with your teammate. **Everyone needs to perform** (and who did what needs to be **explicitly** discussed in the report)

How to Write Good Proposal & Report

- What's the problem definition? Why it is important? What were done in literature (try summarizing & categorizing)? What remain to be the main challenges? What technical gap do you aim to reduce?
[\[TBD in your proposal\]](#)
- What are the experiment settings? What are the main baselines to compare with? What are the main advantages and drawbacks of your idea as shown by experiments? What are potential future works?
[\[TBD in your report\]](#)
- It's not easy to fill a CVPR template.
 - FYI: If prof devote full energy to writing a CVPR draft from scratch (with all technical work already done), it'll take him ~2 full days
 - **Use Latex, Use Latex, Use Latex. Word not accepted!!**

Good Project Example

- Problem definition? [Introduction]
- Why it is important? [Introduction]
- What were done in literature (try summarizing & categorizing)? [Related Work]
- What remain to be the main challenges? What technical gap do you aim to reduce? [Related Work]
- **[Method]**
- What are the experiment settings? What are the main baselines to compare with? [Experiments]
- What are the main advantages and drawbacks of your idea as shown by experiments? [Experiments]
- What are potential future works? [Conclusion & Future Work]