CS 6476 Computer Vision

Georgia Tech

I. General Information (See Tabs for more Information)

Course Number:	CS 6476-O01 (Spring 2020)
Course Name:	Computer Vision
Description:	This course provides an introduction to computer vision including fundamentals of image formation, camera imaging geometry, feature detection and matching, stereo, motion estimation and tracking, image classification and scene understanding. We'll develop basic methods for applications that include finding known models in images, depth recovery from stereo, camera calibration, image stabilization, automated alignment, tracking, and recognition. The focus of the course is to develop the intuitions and mathematics of the methods in lecture, and then to learn about the difference between theory and practice in the problem sets.
Program:	Georgia Tech's Online MS in Computer Science

II. Team/People

Instructor	Irfan Essa	
	Contact via Piazza. Email for Private and Urgent Issues ONLY, please use CS6476 in subject line.	
Video Lectures by	Aaron Bobick	
	Do not contact Professor Bobick at all about the logistics of the class. You may contact him to thank him though.	
Head TAs	Apoorva Beedu	Contact via Piazza. Email for Private and Urgent Issues ONLY, Use Post to Instructors OPTION in Piazza
	Vincent Cartillier	
TAs	Harish Kashyap	
	Devanshee Shah	
	Jonathan Balloch	
	Phuoc Vu	
	Geonsoo Kim	
	Sean Ye	
	Sushrut Kulkarni	
	Sivagami Nambi	
	Ruiyang Qin	
Instructional Designers	Arpan Chakraborty	
Video Production	Megan Smith	

III. Important Websites

Canvas	https://gatech.instructure.com/courses/159532	Grading, Schedule, Syllabus, and Final Exam.
Google Doc	http://bit.ly/CVatGT-Spring2021	This document PUBLISHED!
Piazza	https://piazza.com/gatech/spring2021/omscs6476/home	For Official Announcements, Forums for discussion.
Gradescope	See CANVAS	Assignment Submission.

Notes:			
1	All students are required to participate, attend to above websites. No EXCEPTIONS		
2	No information will be shared via any other site (G+, FB, etc.). Students are welcome to create their own social media sites, but none of the instructors are required to be on those sites and will not participate there regularly.		

IV. Assignments & Grading

A.	Assignments Type 1: There will be 1 assignments of this type	5.0%	
B.	Assignments Type 2: There will be 5 assignments of this type	70.0%	
C.	Project: Topics to choose from will be given near the release date	15.0%	
D.	Exam: Cumulative, timed, and online	10.0%	
	Total	100.0%	

V. Books / Readings

1	Szeliski (2010), "Computer Vision: Algorithms and Applications", Springer, 2010	SZ	http://szeliski.org/Book/
2	Forsyth & Ponce (2011), "Computer Vision: A modern approach", 2nd Ed., Pearson 2011	FP	Publishers Site
	Other readings maybe added		

VI. Policies

A. Communications			
1	*WITH the Professor and TAs should be exclusively through Piazza. No emails! Professor and TAs will do their best to respond to questions within 2 days of posted question.*		
2	*Piazza will serve as the primary and ONLY source of communications and sharing announcements with the students.*		
3	*All communications should be professional and courteous. TA/Graders and Students are all required to maintian high standards of interaction on Piazza*		
4	*The online forum (Piazza) is for course related discussion. Not a forum to publically raise issues about the class. If you have some issues, please raise them PRIVATELY via PIAZZA just with the INSTRUCTORS!*		
B. Assignments			
1	We will be using the class autograder for submitting the homework. Dates and Deadlines are counted by the final submission timestamp.		
2	Homework Assignments will be graded both with an autograder portion and a TA-graded portion, with a list of criteria (specified on the assignment) such as quality of work, completeness, insight into technical issues, insight into other relevant issues, etc.		
3	Each assignment will be fully graded and returned USUALLY within two weeks of submission. Please allow two weeks to pass to ask about the current grading status. If there is delay for some reason, it will be announced.		
4	Late Assignments: Everything is DUE when specified. Extensions are allowed up to 2 days per assignments. A deduction of 10% is applied per late day. After 2 days the submission will receive a grade of 0. If there are circumstances such as a family emergency that prevent you from submitting after the deadline, you MUST contact the INSTRUCTORS via PIAZZA and as warranted the GA Tech Dean of Students.		
5	See collaboration policy below for more details on how to collaborate		
6	Instruction included with the assignment and in the code provided MUST be explicitly followed, especially any and all directions like how to submit and the file naming conventions specified		

7	Regrade requests can be made via gradescope. Please provide clear details as to why you are requesting a regrade. All regrade requests must be made within ONE (1) week of the grade release. For grades released in the last week of the term, the regrade request must be made by the last day of the final exams week.
8	There will be no peer feedback this semester.We tried it, it did not work, so we are not using it.
9	All DUE dates will be on the Canvas, and the timezone will be Anywhere on Earth Time (AoE) time. Please plan accordingly
10	As we have a 6 assignments, there may be overlap on assignments. We expect students to manage their schedule to meet the deadlines for each of the assignments
11	Students are welcome to work and submit assignments before their due date. The lectures will all be available from week 1. TAs will try to answer questions related to the assignments as much as they can, but most conversations maybe most active as per the Schedule planned for the class
12	All submissions will be checked for plagarism. Students should do their own work and submit their own work. Any suspicion of copying will be reported to the Office of Student Integrity for further analysis.
13	If the assignment does not follow the specific requirements, like using the REQUIRED template, the asssignemnt will be returned UNGRADED with a score of ZERO
C. Discussions (via Piazza)	All class discussions will be on the Piazza site listed above. Here are some very specific guidelines for these discussions, which MUST be adhered to.
1	All posts must be professional and cordial and about/related to the course material at hand.
2	Students WILL not post specific answers to any of the assignments to Piazza before the due date of said assignments. In some instances TAs will start a special discussion for students to share and discuss their assignments after the DUE date.
3	Before asking a question on the Forum, students should search for an answer to their question. It most probably has been discussed already
4	Instructor team will start weekly discussion threads about relevant topics. Before posting a new thread, please see these threads and these official threads will be actively monitored by the Instructor team
5	Instructor team will attempt to answer all questions, as possible. But, please do NOT expect answers within hours. TAs are instructed let students answer each others questions too, as that support more interactive learning.
6	Students can post annonymously to the class, but their IDENTITIES will be known by the instructor team
7	Instructor team is required to maintian privacy of all students, so please ensure that you communicate with them privately (using the private chanels via Piazza) to communicate with them.
8	If there is a complaint about the class, please DO not post a public note to PIAZZA. Please communicate directly with the instructor team. We will do our best to address it. If it is NOT addressed, please use OMS Assistance (Point G. below).
D. Websites	Following are the websites we will OFFICIALLY use for this class.
1	Canvas: Grading and Final Exam.
2	Piazza: For Official Announcements, Forums for discussion.
3	Gradescope: Assignment Submission.
4	Google Docs: (This site) for syllabus/schedule and general information.
5	No information will be shared via any other site (G+, FB, etc.). Students are welcome to create their own social media sites, but none of the instructors are required to be on those sites and will not participate there regularly.
E. Grading	*Grading Scale (for each assignment/unit and for the entire class).*
1	Above 90%
2	80%-89.99%
3	70%-79.99%
4	60%-69.99%
5	Below 60%

6	*Note: Any work that meets all the requirements will be given a 95%. For scores above 95%, work has to include submission with the "challenge problems," which are included, beyond the basic requirements of the assigned work.*		
F. Honor Code			
1	All assigned work is expected to be individual, except where explicitly written otherwise. You are encouraged to discuss the assignments with your classmates; however, what you hand in should be your own work. If any work product was produced based on discussions with someone else (in the class OR outside), please specify clearly in the final turn-in.		GT Honor Code
G. Collaboration Policy			
1	As stated above with the Honor Code, but worth making explicit here. Collaboration between students on work assigned in class is fine. You are encouraged to discuss your work with each other. But each individual students MUST submit their own work, done solely by themselves. In some cases, you may have had a fellow student or a non-student friend, help you with an assignment or work (say to take a picture!). You are REQUIRED to acknowledge any help you may have received in completing the work assigned, even as small as holding the light, or suggesting a possible path to a solution. Please be explicit and provide details. We will be checking for code plagiarism in our assessment, so please NO copying code from the Web/Internet.		
2	Any code snippets must be cited and limited to maximum of 5 lines. We understand you may not be familiar with some libraries and APIs presented in this class and you will likely look up usage examples for individual functions. You may study these examples but the code used in your assignment must be your own. As part of this course's grading process, any suspicion of copying will be reported to the Office of Student Integrity for further analysis.		
3	All students must also ensure that they do not make any of the code for problem sets publicly available and are required to take steps to prevent future students from having access to it. Consequently, if you're using any version control systems such as git, please make sure that you mark your repositories as private.		
4	You may not collaborate at all on the final exam. Students are not to discuss any questions or answers from the actual exam with classmates or anyone else until after the testing period is complete.		
H. OMS Assistance	If after contacting your TA and the instructor you do not feel your issue has been resolved, you may escalate the issue by emailing oms-advising@cc.gatech.edu and asking that your ticket to be assigned to Jay Summet.		