Assignments - CS6150, Computing for Good, Fall 2021

Professor: Santosh Vempala  
**UNDER CONSTRUCTION**

[Schedule](schedule.docx) | [Syllabus](syllabus.docx) | [Public Site](https://computingcenterforsocialgood.org/c4g2/) | [Academic Calendar](https://registrar.gatech.edu/calendar) | [Resources](#Resources)

(santosh: is the Mid-term paper worth 15% or 20%? We had another 5% for assignments, right? Is that folded into participation?)

(dante: I will modify this per the info in the Course Outline doc. DONE)

* ~~On-Boarding Quiz~~
* ~~Project: 70% (reflection papers)~~
  + ~~Milepost 1 - 33%~~
  + ~~Milepost 2 - 33%~~
  + ~~Project Deliverable Presentation - 34%~~
* ~~Mid-Term Exam (paper): 15% - All readings/material from 1st half of course~~
* ~~Assignments: 15% (or 5% for Assignments, and 5% for Participation?)~~

|  |  |
| --- | --- |
| **Assignment** | **Weight (%)** |
| [On-Boarding Quiz](#Onboarding) | 0 |
| [Assignment 1 (Skills/Interests)](#Assignment1) | 1 |
| [Assignment 2 (Tech Survey)](#Assignment2) | 4 |
| [Midterm Paper](#Midterm) | 15 |
| [Project](#Project)  [Initial Goals](#InitialGoals) (individual)  [Team Formation](#TeamFormation)  [Team Goals & Deliverables](#TeamGoals)  [Present to TA](#PresentToTA)  [Team Web Page](#TeamWebPage)  [Initial Evaluations](#InitialEvaluations) (with partner organizations)  [Demo](#DemoTA) (present to TA)  [Field Evaluation](#FieldEval)  [Final Report](#FinalReport)  [Final Presentation](#FinalPres) (video recording) | 70  2  3  5  5  5  10  10  10  10  10 |
| [Peer Project Evaluation](#PeerReview) | 10 |

On-Boarding Quiz [[TOP](#_top)]

This is simply a Canvas quiz to ensure that the quiz functionality is enabled for you and you’re all set for the Mid-Term Exam.

Assignment 1: Skills & Interests Exercise [[TOP](#_top)]

**NOTE:**Your name and your assignment will be posted for your classmates to see to facilitate team formation. However, your grade will not be publicly posted.

***Objectives.*** Although it’s not included in the Project Sub-Assignments section, this assignment kicks off the Project, which comprises a large part of your final grade. The goals are as follows:

* Describe your skills and interests
* Learn about the skills and interests of your classmates
* Foster collegiality and  participation in the class

*Technical requirements:*

* Plain text submission directly in Canvas assignment window (no file attachment)
* 500 word maximum

*Content requirements:*

|  |  |
| --- | --- |
| Evaluation Item | Points |
| Overall efficiency/effectiveness of communication | 40 |
| Minimum of 3 skills (HTML, Python, etc.) | 30 |
| Minimum of 3 interests in the realm of computing for good (environment, hunger, etc.) | 10 |
| Your time zone/country | 10 |
| Things important to you regarding team dynamics | 10 |
| OPTIONAL: Hobbies, videoconference feng shui preferences,  etc. | 0 |

Assignment 2: Tech Survey [[TOP](#_top)]

Midterm Paper [[TOP](#_top)]

Team Project [[TOP](#_top)]

**Objectives**

* Implement the theoretical concepts from the course in a real-world project
* Obtain and/or improve upon client management skills
* Develop an appreciation of the components of a successful C4G project

**Description**

The project component of the class consists of a series of individual assignments. This *team project* should benefit an organization or cause of your choice. Your project may come from the [Potential Partners](potential_partners.docx) document; alternatively, you may select another organization. If you choose an alternative organization, please forward the following information to the Instructors Team: *website URL, contact name, contact email, contact phone*. Your project is expected to reflect a level of maturity consistent with a graduate program in computer science, and exhibit completeness that is commensurate with the number of team members. The project assignment should be designed to mitigate one or more societal issues. The primary goal should be to increase good for society. This “good” is loosely described as improving one or more societal issue. These issues may involve, but are not limited to:

* Hunger
* Homelessness
* Peace
* Environment
* Social justice
* Indigenous rights
* Educational equity

**Team Project: Sub-Assignments Details**

*Initial Goals (individual submission)* [[TOP](#_top)]

This is a paper that each student will submit in Canvas regarding execution of a potential C4G project. This should be based on a real organization that you have researched. We realize that you may not know all their needs. However, do the best you can, based on what is available publicly. Please do not discuss this assignment with others.

Technical requirements:

* One PDF document
* Single-spaced 1-2 pp total (including references, appendices, etc.)

*Content requirements:*

|  |  |
| --- | --- |
| Evaluation Item | Points |
| Description of primary needs of the organization | 25 |
| Description of secondary needs of the organization | 25 |
| Plan for incorporating sustainability/maintainability of the project | 25 |
| Plan for evaluating success of the project | 25 |

*Team Formation* [[TOP](#_top)]

*Description.* Although you may be a “team of one”, we recommend working in a team with at least one other person. This allows you to leverage diverse backgrounds and talent, thereby facilitating learning. Team are limited to a *maximum of 5 members*. Any issues with team formation or dynamics should be brought to the attention of the Instructors team early and ASAP.

*Process.* This is outlined in the steps below:

1) Instructors team - posts available projects to Piazza  
2) Students - post reply to the project with which they would like to work; students are welcome to suggest their own ideas for projects.  
3) Project member – submits *Team Formation Assignment* to Canvas. NOTE: If you achieve the maximum number of students (5) allowed on a team, please post the word **Closed** in bold font, at the top of the Piazza Project Thread**.**

(santosh: are these points consistent with our overall grading scheme?)

(dante: Yes. The points below represent a more detailed breakdown of how the individual assignment submission will be assessed. Perhaps some form of this could be the TA grading rubric for this particular assignment?)

*Technical requirements:*

* One PDF document
* Single-spaced 1-2 pp total (including references, appendices, etc.)

*Content requirements:*

|  |  |
| --- | --- |
| Evaluation Item | Points |
| Team name | 15 |
| Project lead’s name | 15 |
| Team members’ names | 15 |
| Each team member’s assigned duties | 10 |
| Description of the problem you hope to solve | 10 |
| How you plan to mitigate the problem | 10 |
| Challenges you anticipate | 10 |
| Work done so far on the project (it’s OK if this is minimal, but please state) | 5 |
| Mileposts and goals | 10 |

*Team Goals & Deliverable* [[TOP](#_top)]

Objectives. This assignment provides you an opportunity to organize both your team and a workflow. Additionally, you have an opportunity to predict the look of a deliverable. This is, of course, done in dialogue with your client.

*Technical requirements:*

* One PDF document
* Single-spaced 1-2 pp total (including references, appendices, etc.)

*Content requirements:*

|  |  |
| --- | --- |
| Evaluation Item | Points |
| Goals are clearly stated | 25 |
| Goals are sufficiently granular in scope | 25 |
| Deliverable is clearly described | 25 |
| Deliverable vision is bolstered with diagrams, etc. | 25 |

*Present to TA* [[TOP](#_top)]

*Objectives.* The primary goal is crafting a presentation regarding your proposed project. This will be presented to a TA over videoconference. To allow for proper planning, it is recommended that you schedule your presentation no later than 1 week in advance with your assigned TA. Please see Piazza for your team’s assigned TA.

*Technical requirements – 10 min total:*

* 4-5 minutes in length
* 4-5 minutes: TA questions

*Content requirements:*

|  |  |
| --- | --- |
| Evaluation Item | Points |
| Content was professional | 50 |
| Content was engaging | 20 |
| Presenter or presenters were clear and articulate | 15 |
| Team members answered TA questions succinctly and clearly | 15 |

*Team Web Page* [[TOP](#_top)]

*Objectives.* This assignment’s overarching goal is the creation of an appropriate UI for your project. Your Web page will be tested in checkers for HTML/CSS quality as well as accessibility. Please see the [Resources](#Resources) in this document for tools to conduct these tests in advance of your submission.

*Technical requirements – Web page*

* Web page URL sent via Canvas submission

*Content requirements:*

|  |  |
| --- | --- |
| Evaluation Item | Points |
| Overall UX considerations | 20 |
| Navigation | 20 |
| Web content accessibility | 20 |
| Sustainability | 20 |
| Maintainability | 20 |

*Initial Evaluations (with partner organizations)* [[TOP](#_top)]

*Objectives.* This assignment concludes with your submission of a report regarding your initial evaluation of the partner organization’s requirements. You will base this report primarily on:

* Communication with the client
* Information provided in Piazza
* Your proposals to the client which they have approved

*Technical requirements:* 1-2 pp PDF submitted to Canvas.

*Content requirements:*

|  |  |
| --- | --- |
| Evaluation Item | Points |
| Overall quality of proposed solution | 40 |
| Description of client interaction and what was derived | 20 |
| Delegation of tasks | 20 |
| Execution plan including mileposts | 20 |

*Demo (present to TA)* [[TOP](#_top)]

*Objectives.* The Project, in its final form, is demonstrated to a TA before the client sees it. It is assumed that the Project is basically completed by this point, and that this meeting will result in only minor adjustments.

*Technical requirements.* 3-5 minute presentation to a TA. Specifics regarding presentational artifacts (PowerPoint, etc.) are up to you.

*Content requirements. NOTE: this rubric is basically the same as the one that your client will complete in the field evaluation:*

|  |  |
| --- | --- |
| Evaluation Item | Points |
| How well did the team solve the problem? | 50 |
| How sustainable/maintainable is the deliverable? | 20 |
| How accessible was the team lead and/or members? | 15 |
| If the grading TA was augmenting technical staff, how likely she/he be to hire a member/members of this team? | 15 |

*Field Evaluation* [[TOP](#_top)]

*Objectives.* This assignment involves evaluation of the team by the client organization according to the metrics shown below. It is completed by the client after the project is submitted in its “final form” to the client. It is understood that no project is ever “final” and that projects are organic and evolving. If you feel that your field evaluation was not fair, please submit a regrade request as soon as possible to the Instructors Team.

*Technical requirements:* Your client will submit a form per the metrics shown below under ‘Content requirements.’ Soon after receiving your evaluation, your grade will then appear in Canvas. If you do not see your grade in Canvas within 2 days of the ‘Deadline’, please follow up via email with your client. If you do not see your grade in Canvas within 2 days of sending your email, please follow up via private post with the Instructors Team and submit a copy of your follow-up email to your client.

*Content requirements:*

|  |  |
| --- | --- |
| Evaluation Item | Points |
| How well did the team solve your problem? | 50 |
| How sustainable/maintainable is the deliverable? | 20 |
| How accessible was the team lead and/or members? | 15 |
| If you decide to augment your technical staff, how likely would you be to hire a member/members of this team? | 15 |

*Final Report (individual submission)* [[TOP](#_top)]

*Objectives.* This assignment includes 2 major components – your final project report, and a conference-style poster. The report should include a complete account of your project, start to finish.

*Technical requirements:*

* Report: PDF, 5 pp total, single-spaced
* Conference Poster - [guide](https://guides.nyu.edu/posters) (please feel free to post other potentially valuable references to Piazza)

*Content requirements (for the report).* At a minimum, please include the following sections:

|  |  |
| --- | --- |
| Evaluation Item | Points |
| Client requirements assessment | 20 |
| Proposed deliverable   * Sustainability plan * Maintainability plan | 20 |
| Execution   * General process * Challenges | 20 |
| Recommendations to client | 10 |
| Summary   * Successes * Failures * Potential future work on project | 20 |
| What was learned | 10 |

*Final Presentation (video recording)* [[TOP](#_top)]

*Objectives.* The goal is creation of a video recording that documents the project in its entirety. This should be viewable as a standalone video in MP4 format (YouTube-compatible). You may choose to have a single presenter or may involve all group members in the presentation.

*Technical requirements.* SingleMP4 file submitted to Canvas. 5-minute maximum.

*Content requirements.* Please ensure that the video includes, at a minimum, the following:

|  |  |
| --- | --- |
| **Evaluation Item** | **Points** |
| *Admin data*  Project title  Client organization name, contact, and contact’s email  Team data – for each team member including Project Manager: name, email, job role(s) | 20 |
| *Project narrative*  Client’s needs. Description and how needs were met inc. maintainability, sustainability (20)  Project execution. What transpired during the development period including challenges and how they were overcome (20) | 80 |
| Recommendations to client (20) |  |
| Summary (10)   * Successes * Failures * Potential future work on project |  |
| What was learned (10) |  |

Mid-Term Exam (Reflection Paper)

The midterm “exam” is a reflection paper on the broad topic of ***sustainability***. **Further details will be announced on or around Monday September 20, 2021**. As listed in the Syllabus, it is **due on Sunday October 10, 2021 11:59 PM**. Please abide by the following guidelines:

* 5-8 pp single-spaced, 1000-2000 words
* Use any resources you would like (text, Google Scholar, etc.)
* Cite per scholarly best practices
* Include but do not limit your paper to the following categories on which you’ll be assessed:
  + Important general considerations – 40%
  + Stakeholder impact on sustainability – 30%
  + Examples of sustainability failures and their causes – 30%

Peer Project Evaluation [[TOP](#_top)]

During the project period, you are required to provide **two weekly project reviews** – one of your project, and at least one other class project (please see links in Piazza for project locations). Please provide *substantive* [constructive criticism](https://www.indeed.com/career-advice/career-development/constructive-criticism) of the project at its expected stage of development for that week. The above link provides a guide for what constitutes constructive criticism.

Resources (W3C) [[TOP](#_top)]

*Accessibility Evaluators and Guidelines*

* [W3C Guidelines](https://www.w3.org/WAI/standards-guidelines/)
* [Level Access](https://www.webaccessibility.com/)
* [Wave](https://wave.webaim.org/)

*Code Evaluators*

* [HTML Code Evaluator](https://validator.w3.org/)
* [CSS Evaluator](https://jigsaw.w3.org/css-validator/validator.html.en)