

5 Professionalism

This discussion is with respect to the paper titled “ Contextualizing Professionalism in Capstone Projects Using the IDEALS Professional Responsibility Assessment”, *International Journal of Engineering Education* Vol. 28, No. 2, pp. 416–424, 2012

5.1 AREAS OF RESPONSIBILITY

Using the IEEE code of ethics:

Area of responsibility	Definition	NSPE Canon	IEEE differences
Work Competence	Perform work of high quality, integrity, timeliness, and professional competence.	Perform services only in areas of their competence; Avoid deceptive acts.	The IEEE code of ethics includes a focus on work competence, namely code 6, “to maintain and improve our technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations.” In addition, the IEEE code includes sections about disclosing information promptly and completing professional work.
Financial Responsibility	Deliver products and services of realizable value and at reasonable costs.	Act for each employer or client as faithful agents or trustees.	IEEE code 5 states, “to be honest, and realistic in stating claims and estimates based on available data.” In addition, IEEE code requires the rejection of all bribery, which falls under the umbrella of financial responsibility.
Communication Honesty	Report work truthfully, without deception, and understandable to stakeholders.	Issue public statements only in an objective and truthful manner; Avoid deceptive acts.	IEEE code 5 states, “to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, to be honest, and realistic” and also to “credit properly the contributions of others.” In addition, the IEEE code of ethics also includes a section on avoiding false or malicious actions, rumors, or any other statements contradictory to general engineering ethical standards that could be detrimental to yourself and others.
Health, Safety, Well-Being	Minimize risks to safety, health, and well-being of stakeholders.	Hold paramount the safety, health, and welfare of the public.	The IEEE code holds “paramount the safety, health, and welfare of the public” and strives to comply with ethical design. The IEEE includes this as its first code of ethics and places an emphasis on health, safety, and well-being.
Property Ownership	Respect property, ideas, and information of clients and others.	Act for each employer or client as faithful agents or trustees.	The IEEE code seeks to “avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist.” In addition, the code seeks “to avoid unlawful conduct in professional activities.” These IEEE codes, 3 and 4, apply to the concepts of respecting property and ideas of clients and others.
Sustainability	Protect environment and natural resources locally and globally.	Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor ,reputation, and usefulness of the profession.	The IEEE code 1 “strives to comply with ethical design and sustainable development practices...and to disclose promptly factors that might endanger the environment.”
Social Responsibility	Produce products and services that benefit society and communities.		The IEEE code 2: “improve the understanding by individuals of the capabilities and societal implications of conventional and emerging technologies, including intelligent systems.” IEEE code also places an emphasis on avoiding harm to others or engaging in harassment or other illegal and unethical behaviors of any kind.

The IEEE code of ethics differs from the NSPE version only slightly in each area, and most of the concepts are the same. The IEEE code of ethics also includes an important clause, reading, “to support colleagues and co-workers in following this code of ethics, to strive to ensure the code is upheld, and to not retaliate against individuals reporting a violation”, which relates to every aspect of the code of ethics.

5.2 PROJECT SPECIFIC PROFESSIONAL RESPONSIBILITY AREAS

Area of responsibility	Definition	Does it Apply? How are we doing in the context of our project?
Work Competence	Perform work of high quality, integrity, timeliness, and professional competence.	This certainly applies to our project and we are seeking to meet this responsibility in the context of our project by meeting and checking-in with our client and completing all class assignments on time, as well as moving ahead with frontend and backend app development.
Financial Responsibility	Deliver products and services of realizable value and at reasonable costs.	This applies because we must understand the need of educators and students to have access to this type of classroom management software at low costs while not sacrificing value. For this reason and others, we seek to offer this application free of cost to Iowa State students, faculty, teaching assistants, and more.
Communication Honesty	Report work truthfully, without deception, and understandable to stakeholders.	We adhere to this area of responsibility by being understandable and upfront with our client and also being completely honest when completing each of the class assignments.
Health, Safety, Well-Being	Minimize risks to safety, health, and well-being of stakeholders.	This does apply to our app development and we will always minimize risks to safety, health, and well-being of our users and stakeholders as our top priority.
Property Ownership	Respect property, ideas, and information of clients and others.	This strongly applies to our project because we must be careful not to rip off any of the ideas implemented by prior solutions in this space, including TopHat. We are planning to carefully implement new features which do not fully overlap with solutions already implemented. In addition, our app processes student questions and class information, which the app needs to keep confidential and only viewable to students, TAs, and professors.
Sustainability	Protect environment and natural resources locally and globally.	These concepts do apply to our project and we always seek to leave the smallest environmental impact possible during app development. In addition, we seek to produce a low/no-cost product that will benefit students, TAs, and professors with a high level of accessibility and a positive impact on education.
Social Responsibility	Produce products and services that benefit society and communities.	

5.3 MOST APPLICABLE PROFESSIONAL RESPONSIBILITY AREA

Identify one area of professional responsibility that is both important to your project, and for which your team has demonstrated a moderate or high level of proficiency in the context of your project. Briefly describe what this responsibility means to your project, the ways in which your team has demonstrated the responsibility in the project, and specific impacts to the project that you have observed

Area of professional responsibility important to both our project and which our team has demonstrated a moderate or high level of proficiency in the context of our project: Communication, Honesty

What it means to the project: Communication and honesty is very important to our project so that we can develop a good relationship with the client and with each other. It is also important so we can adhere to each of the IEEE code of ethics and work on the project responsibly and ethically. In addition, honesty is important to evaluate all of our work and make sure it is not too similar to previously existing solutions in the space, including TopHat.

Ways we have demonstrated the responsibility:

We have demonstrated this area of responsibility by being upfront and honest with our client, and also being completely honest when completing each of the assignments. We have also had good team communication, and all team members have been involved in completing the assignments and having a role in the team, which has helped.

Specific impacts to the project that we have observed:

Establishing good communication has improved our teamwork and also helped us avoid conflict. Hopefully, moving forward we can keep our communication and honesty when communicating with each other and with the client in order to create the best possible application.