

# Question & Answer platform

A web platform where users can post questions and receive answers from other users, similar to Stack Overflow. Built with React (frontend) and Spring Boot (backend), with features including user registration, login, posting questions with tags, and answering questions. Developed as a personal learning project and as a QA course assignment demonstrating security as a quality outcome.

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Context of use: Education  
Level of education: Bachelor

# Technology Impact Cycle Tool

Question & Answer platform

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## Impact on society

What impact is expected from your technology?

*This category is only partial filled.*

### **What is exactly the problem? Is it really a problem? Are you sure?**

The problem this platform addresses is the same one Stack Overflow was built to solve: people learning or working in software development often get stuck on technical problems and need a place to ask questions and get answers from a knowledgeable community.

### **Are you sure that this technology is solving the RIGHT problem?**

*This question has not been answered yet.*

### **How is this technology going to solve the problem?**

*This question has not been answered yet.*

### **What negative effects do you expect from this technology?**

*This question has not been answered yet.*

### **In what way is this technology contributing to a world you want to live in?**

*This question has not been answered yet.*

### **Now that you have thought hard about the impact of this technology on society (by filling out the questions above), what improvements would you like to make to the technology? List them below.**

*This question has not been answered yet.*

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## Hateful and criminal actors

What can bad actors do with your technology?

*This category is only partial filled.*

### **In which way can the technology be used to break the law or avoid the consequences of breaking the law?**

Users could post harmful or offensive content anonymously to harass others. Someone could also steal another user's account if passwords are not stored securely. To prevent this, the platform hashes passwords using BCrypt and uses secure cookies so attackers cannot steal login sessions.

### **Can fakers, thieves or scammers abuse the technology?**

*This question has not been answered yet.*

### **Can the technology be used against certain (ethnic) groups or (social) classes?**

*This question has not been answered yet.*

### **In which way can bad actors use this technology to pit certain groups against each other? These groups can be, but are not constrained to, ethnic, social, political or religious groups.**

*This question has not been answered yet.*

### **How could bad actors use this technology to subvert or attack the truth?**

*This question has not been answered yet.*

### **Now that you have thought hard about how bad actors can impact this technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Privacy

Are you considering the privacy & personal data of the users of your technology?

*This category is only partial filled.*

### **Does the technology register personal data? If yes, what personal data?**

Yes, the platform collects personal data. When a user registers, it stores their username, email address, and password (hashed, not plain text). It also stores the questions and answers they post, which could indirectly reveal personal opinions or knowledge about certain topics. No special categories of personal data (such as health or ethnicity) are collected. To protect this data, passwords are never stored in plain text and secure cookie settings are used to protect login sessions

### **Do you think the technology invades the privacy of the stakeholders? If yes, in what way?**

*This question has not been answered yet.*

### **Is the technology is compliant with prevailing privacy and data protection law? Can you indicate why?**

*This question has not been answered yet.*

### **Does the technology mitigate privacy and data protection risks/ concerns (privacy by design)? Please indicate how.**

*This question has not been answered yet.*

### **In which way can you imagine a future impact of the collection of personal data?**

*This question has not been answered yet.*

### **Now that you have thought hard about privacy and data protection, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Human values

How does the technology affect your human values?

*This category is only partial filled.*

### **How is the identity of the (intended) users affected by the technology?**

Currently the platform allows users to post questions and answers under their username. This means their questions are visible to others. On the positive side, it encourages knowledge sharing and gives users a way to help others. The platform does not impose any belief or world view, and does not collect sensitive personal data that could judge users.

### **How does the technology influence the users' autonomy?**

*This question has not been answered yet.*

### **What is the effect of the technology on the health and/or well-being of users?**

*This question has not been answered yet.*

### **Now that you have thought hard about the impact of your technology on human values, what improvements would you like to make to the technology? List them below.**

*This question has not been answered yet.*

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## Stakeholders

Have you considered all stakeholders?

*This category is only partial filled.*

**Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by answering these questions.**

**Name of the stakeholder**

students, developers, educators, platform developer

**How is this stakeholder affected?**

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**Did you consult the stakeholder?**

No

**Are you going to take this stakeholder into account?**

No

**Did you consider all stakeholders, even the ones that might not be a user or target group, but still might be of interest?**

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**Now that you have thought hard about all stakeholders, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Data

Is data in your technology properly used?

*This category is only partial filled.*

### **Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into account in the technology?**

As a student developer, I am aware of some fundamental data pitfalls but not all. I have taken steps to protect user data by hashing passwords with BCrypt and using secure cookies. However, I have not yet implemented features like data minimisation (only collecting what is strictly necessary), a privacy policy, or a way for users to delete their account and data. but I have not yet built any content moderation system.

### **How does the technology organize continuous improvement when it comes to the use of data?**

*This question has not been answered yet.*

### **How will the technology keep the insights that it identifies with data sustainable over time?**

*This question has not been answered yet.*

### **In what way do you consider the fact that data is collected from the users?**

*This question has not been answered yet.*

### **Now that you have thought hard about the impact of data on this technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Inclusivity

Is your technology fair for everyone?

*This category is only partial filled.*

## Will everyone have access to the technology?

*This question has not been answered yet.*

## Does this technology have a built-in bias?

The platform itself does not have an algorithmic bias since it does not use AI or automated decision-making.

## Does this technology make automatic decisions and how do you account for them?

*This question has not been answered yet.*

## Is everyone benefitting from the technology or only a a small group?

### Do you see this as a problem? Why/why not?

*This question has not been answered yet.*

## Does the team that creates the technology represent the diversity of our society?

*This question has not been answered yet.*

## Now that you have thought hard about the inclusivity of the technology, what improvements would you like to make? List them below.

*This question has not been answered yet.*

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## Transparency

Are you transparent about how your technology works?

*This category is only partial filled.*

### **Is it explained to the users/stakeholders how the technology works and how the business model works?**

Currently there is no explanation provided to users about how the platform works or how their data is used. There is no privacy policy, no terms of service, and no onboarding guide. Since this is a learning project with no commercial business model, there is no monetisation to explain. However, if the platform were to be used by real users, it would need a clear privacy policy explaining what data is collected and how it is used, in order to comply with privacy legislation such as GDPR.

### **If the technology makes an (algorithmic) decision, is it explained to the users/stakeholders how the decision was reached?**

*This question has not been answered yet.*

### **Is it possible to file a complaint or ask questions/get answers about this technology?**

*This question has not been answered yet.*

### **Is the technology (company) clear about possible negative consequences or shortcomings of the technology?**

*This question has not been answered yet.*

### **Now that you have thought hard about the transparency of this technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Sustainability

Is your technology environmentally sustainable?

*This category is only partial filled.*

### **In what way is the direct and indirect energy use of this technology taken into account?**

Energy use has not been explicitly considered in the development of this platform. As a small-scale learning project running on a local server, the energy consumption is minimal. However, if the platform were to scale to a larger user base, energy use would become more relevant

### **Do you think alternative materials could have been considered in the technology?**

*This question has not been answered yet.*

### **Do you think the lifespan of the technology is realistic?**

*This question has not been answered yet.*

### **What is the hidden impact of the technology in the whole chain?**

*This question has not been answered yet.*

### **Now that you have thought hard about the sustainability of this technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*

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## Future

Did you consider future impact?

*This category is only partial filled.*

### **What could possibly happen with this technology in the future?**

In the future, the platform could grow into a larger community where developers share knowledge at scale. Positively, it could help many people learn and solve problems faster. However, there are also risks it could attract spam, misinformation, or harmful content if no moderation system is in place. If user data is not properly protected as the platform scales, it could become a target for data breaches. There is also a risk that automated bots could flood the platform with fake questions or answers. To prevent these issues, future development should include content moderation, rate limiting, and stronger security measures.

### **Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one utopian scenario.**

*This question has not been answered yet.*

### **Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one dystopian scenario.**

*This question has not been answered yet.*

### **Would you like to live in one of this scenario's? Why? Why not?**

*This question has not been answered yet.*

### **What happens if the technology (which you have thought of as ethically well-considered) is bought or taken over by another party?**

*This question has not been answered yet.*

### **Impact Improvement: Now that you have thought hard about the future impact of the technology, what improvements would you like to make? List them below.**

*This question has not been answered yet.*