QUICKSCAN - CANVAS

StuReflect

NAME: StuReflect

DATE: May 15, 2026 1:49 PM

DESCRIPTION OF TECHNOLOGY

StuReflect is an AI feedback platform for programming education. Students link their GitHub repo, and with each push the AI analyzes their code based on the course content. Teachers see real-time progress and error patterns in a dashboard.

HUMAN VALUES

Studenten krijgen een nieuwe rol: van passief wachten op feedback naar actief ontvangen bij elke push. Dit is bemoedigend, maar kan ook afhankelijkheid van AI creëren. De docent-student relatie verandert: minder direct contact, meer data-gemedieerd. Risico op stigmatisering: worstelde studenten zijn zichtbaar op het dashboard. Positief: studenten kunnen hulp krijgen zonder de sociale drempel van vragen stellen.

TRANSPARENCY

Ja, we zijn transparant: gebruikers zien welke data wordt verzameld (commits, scores) en hoe. AI-feedback is duidelijk gelabeld als AI-gegenereerd. Het dashboard toont hoe scores worden berekend. We communiceren open over het gebruik van OpenAI API. Docenten kunnen alle AI-feedback inzien en aanpassen. Geen verborgen tracking. Het businessmodel (onderwijstool, geen advertenties of dataverkoop) wordt uitgelegd bij het live gaan.

IMPACT ON SOCIETY

Docenten ontdekken pas na de deadline wie er vastloopt, te laat om in te grijpen. Studenten missen tijdige feedback om van te leren. Het probleem is bevestigd: docenten volgen nu handmatig via GitHub/email/spreadsheets. StuReflect lost dit op en geeft studenten een interactievere leerervaring door directe AI-feedback bij elke push.

STAKEHOLDERS

- Studenten
- Docenten

SUSTAINABILITY

Direct: serverkosten en API-calls naar OpenAI. Indirect: studentapparaten en internetinfrastructuur. Verbeteringen: caching van herhaalde analyses, efficiënte AI-modellen (GPT-5-mini), serverless infrastructuur die afschaalt bij inactiviteit. Netto impact is lager dan fysieke feedbackmomenten of geprinte evaluaties.

HATEFUL AND CRIMINAL ACTORS

Gestolen OAuth-tokens kunnen leiden tot identiteitsdiefstal of ongeautoriseerde toegang tot repositories. Aanvallers kunnen webhooks spoofen om cijfers te manipuleren. Studenten kunnen AI-feedback misbruiken het systeem in plaats van echt te leren. Mitigatie: veilige token-opslag, validatie, duidelijke gebruiksregels en transparante logging.

DATA

We erkennen de beperkingen: commit-frequentie inzet, aantal fouten begrip. We beweren niet dat meer commits automatisch beter leren betekent. AI-feedback kan bias hebben richting bepaalde codeerstijlen. Data toont patronen, niet de waarheid. Daarom blijft de docent centraal: het dashboard ondersteunt interpretatie, vervangt het niet. Scores zijn indicatief, nooit definitief.

FUTURE

Op grote schaal: kan standaardiseren hoe programmeren wereldwijd wordt onderwezen. Risico's: eentonige feedback, minder diverse onderwijsstijlen, docenten verliezen beoordelingsvaardigheden. Zou kunnen evolueren naar selectietool voor werkgevers. Studenten kunnen afhankelijk worden van AI-feedback. Waarborgen: docent blijft centraal, regelmatige ethische evaluaties, weerstand tegen feature creep, studentautonomie behouden.

PRIVACY

Ja, het platform verzamelt: GitHub-gebruikersnaam, email, code-commits, timestamps en voortgangsscores. Code kan onbedoeld persoonlijke info bevatten (namen in comments, API-keys). Geen bijzondere persoonsgegevens (gezondheid/etniciteit), maar werkpatronen kunnen gevoelig zijn. GDPR van toepassing: expliciete toestemming vereist, dataminimalisatie, recht op verwijdering, DPA met OpenAI. Studenten kunnen hun data exporteren of verwijderen.

INCLUSIVITY

Ja, mogelijke bias: de AI is getraind op voornamelijk Engelse code/comments, wat niet-native speakers kan benadelen. Het model kan bepaalde codeerstijlen prefereren boven andere. Het platform veronderstelt GitHub-kennis, wat beginners uitsluit. Ons team is niet volledig divers, dus we kunnen blinde vlekken hebben. Mitigatie: we testen met diverse studentgroepen, bieden alternatieven voor GitHub, en evalueren AI-feedback regelmatig op eerlijkheid.

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QUICKSCAN - CANVAS - HELPSIDE

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HUMAN VALUES

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

To help you answer this question think about sub questions like:

- If two friends use your product, how could it enhance or detract from their relationship?
- Does your product create new ways for people to interact?…

TRANSPARENCY

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

- Is it easy for users to find out how the technology works?
- Can a user understand or find out why your technology behaves in a certain way?
- Are the goals explained?
- Is the idea of the technology explained?
- Is the technology company transparent about the way their…

IMPACT ON SOCIETY

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

Can you exactly define what the challenge is? What problem (what 'pain') does this technology want to solve? Can you make a clear definition of the problem? What 'pain' does this technology want to ease? Whose pain? Is it really a problem? For who? Will solving the problem make the world better? Are you sure? The problem definition will help you to determine…

STAKEHOLDERS

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by…

When thinking about the stakeholders, the most obvious one are of course the intended users, so start there. Next, list the stakeholders that are directly affected. Listing the users and directly affected stakeholders also gives an impression of the intended context of the technology.
…

SUSTAINABILITY

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

One of the most prominent impacts on sustainability is energy efficiency. Consider what service you want this technology to provide and how this could be achieved with a minimal use of energy. Are improvements possible?

HATEFUL AND CRIMINAL ACTORS

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

Can you imagine ways that the technology can or will be used to break the law? Think about invading someone's privacy. Spying. Hurting people. Harassment. Steal things. Fraud/ identity theft and so on. Or will people use the technology to avoid facing the consequences of breaking the law (using trackers to evade speed radars or using bitcoins to launder…

DATA

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into…

There are fundamental issues with data. For example:

- Data is always subjective;
- Data collections are never complete;
- Correlation and causation are tricky concepts;
- Data collections are often biased;…

FUTURE

What could possibly happen with this technology in the future?

Discuss this quickly and note your first thoughts here. Think about what happens when 100 million people use your product. How could communities, habits and norms change?

PRIVACY

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

If this technology registers personal data you have to be aware of privacy legislation and the concept of privacy. Think hard about this question. Remember: personal data can be interpreted in a broad way. Maybe this technology does not collect personal data, but can be used to assemble personal data. If the technology collects special personal data (like…

INCLUSIVITY

Does this technology have a built-in bias?

Do a brainstorm. Can you find a built-in bias in this technology? Maybe because of the way the data was collected, either by personal bias, historical bias, political bias or a lack of diversity in the people responsible for the design of the technology? How do you know this is not the case? Be critical. Be aware of your own biases.…

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