

Algorithmic Impact Assessment

Project Owner: Kelvin Korat

Project Name: Hazardous Event

Automated Recognition System

Why do you want to use AI for this project? (Check all that apply.)

- ☐ Improve quality of decisions
- ☒ Manage backlog/improve efficiency
- ☐ Lower costs
- ☐ Innovation
- ☒ Augment human processes

What capabilities does the project include? (Check all that apply.)

- ☒ Image and object recognition
- ☐ Text and speech analysis
- ☒ Risk assessment
- ☐ Content generation
- ☒ Process optimization and workflow automation
- ☐ Other

Privacy

Will the AI system use personal information as input data?

- ☐ Yes
- ☒ No

How does this affect your risk level?

The model will be able to classify an environment as being in one of several different states, including: no hazards detected, hazardous chemical detected, fire detected, etc.

How was the data used by the system collected?

- ☒ Collected by your organization
- ☐ Purchased from or shared by a third party
- ☐ Open dataset with known owner
- ☐ Open dataset with unknown origin
- ☐ Unclear

How does this affect your risk level?

The data comes from plants that the client has all over the world. Much of the client's workforce are considered part of minority protected groups, so your organization and your client will work together to identify any potential for biases in the system.

Privacy

Will the system use data from multiple different sources?

- ☐ Yes
- ☒ No

How does this affect your risk level?

It won't affect the risk level as the data is taken from within organisation and model has to be implemented there itself so there's no need for collection from multiple sources.

How was user consent managed?

- ☐ No consent obtained
- ☒ Opt in
- ☐ Opt out

How does this affect your risk level?

CMP is used to inform visitors about the types of data they'll collect and what they will use it for

Accountability

Will you maintain a log detailing all the changes made to model and the system?

- ☒ Yes
- ☐ No

How does this affect your risk level?

This will help us analyse what went wrong and why it went wrong as logs will depict of how automation did and when

What type of third-party components will you use? (Check all that apply.)

- ☒ Off-the-shelf commercial products
- ☒ Open source libraries
- ☐ None

How does this affect your risk level?

It will reduce potential biases

Will the system provide an audit trail that records all decision points made by the system?

- ☒ Yes
- ☐ No

How does this affect your risk level?

It will lower the potential risk

Accountability

Is there ongoing monitoring of the system to ensure that the system is operating as intended?

☒ Yes

☐ No

How does this affect your risk level?

Reduce

Transparency and Explainability

Will the algorithm be a trade secret?

- ☒ Yes
- ☐ No

How does this affect your risk level?

It will prevent misuse or prevent loopholes from the enemies or bad intentions competitors

Is it possible to discover how your system renders a decision or performs a function?

- ☐ System is transparent.
- ☒ System is opaque, but it is possible to analyze processes to draw an accurate conclusion about how the decision was made.
- ☐ System is a black box, but detailed records of design and operations have been kept.
- ☐ System is a black box.

How does this affect your risk level?

Reduce

Transparency and Explainability

Is the user documentation easy to understand by the intended audience?

- ☒ Yes
☐ Not sure
☐ No

How does this affect your risk level?

reduce

Was there a human involved at every stage of the machine learning process?

- ☒ Yes
☐ No

How does this affect your risk level?

It will help reduce the hazard risk

Fairness and Non-Discrimination

Does the AI system pertain to any of these categories? (Check all that apply.)

- ✓ Health-related services
✓ Economic (loans, tax benefits, debt collection)

- ✓ Social assistance (welfare, disability claims)
- ✓ Access and mobility (security clearances, border crossings)
- ✓ Licensing or permits
- ☐ None of the above

How does this affect your risk level?

They all collectively are gonna ensure best fit model to get selected for the task project

Does your user base include protected groups of people?

- ☐ Yes—most
- ☒ Yes—some
- ☐ No

How does this affect your risk level?

Reduce

Fairness and Non-Discrimination

Are the impacts of the system reversible?

☐ Yes

☒ No

How does this affect your risk level?

Sometimes yes but mostly no

Who was consulted about design and development decisions? (Check all that apply.)

- ✓ AI team
- ✓ Department that will use the system
- ✓ Users that represent the entire diverse potential user base
- ✓ Business partners ☒ Ethics board

How does this affect your risk level?

Reduce

Safety and Security

Will the system interface with other IT systems?



☒ Yes

☐ No

How does this affect your risk level?

Reduce

What risk management strategies have been employed on the networks and systems that support the AI system? (Check all that apply.)

✓ Risk analysis

✓ Threat intelligence

✓ Threat modeling

✓ Penetration testing

How does this affect your risk level?

Reduce

Safety and Security

How is data collection, storage, and use being managed?

- ☐ Internally
- ☐ Through a third-party service (terms and conditions unknown)
- ☒ Through a third-party service (terms and conditions verified meet strict standards)

How does this affect your risk level?

Reduce

Does the organization have a response team ready to address any safety and security incidents?

- ☒ Yes
- ☐ No

How does this affect your risk level?

Reduce

Other

Describe any additional risks to consider.

Chemicals mismanagemet or maybe model malfunctioning can lead to real threat



Describe any additional mitigation strategies to consider.