

Yachiyo Engineering Uses AI Algorithms to Detect Dam and Bridge Damage

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Yachiyo Engineering developed an AI model to detect damage on the surface of dams and bridges. Because damage comes in many shapes and sizes, traditional image processing techniques are insufficient; visual diagnosis by inspection staff is required.

In the first month, they tried SegNet, a semantic segmentation method, using MATLAB® and some pretrained models. They got better results than they had obtained using an existing image processing-based algorithm. They then improved the accuracy of their algorithm by using other network models and preprocessed images.

This project is expected to greatly reduce the time needed for diagnosing dams all over the world. Yachiyo Engineering is also working toward applying AI to the diagnosis of river embankments and bridges.

Advantages of using MATLAB:

- Examples for semantic segmentation are built-in.
- Pretrained networks can be added.
- It is easy to use multiple GPUs.
- App Designer lets you build and deploy apps.



With MATLAB, we can inspect images and easily detect infrastructure damage. We can share templates among peers, making tasks from machine learning to deep learning straightforward.

