

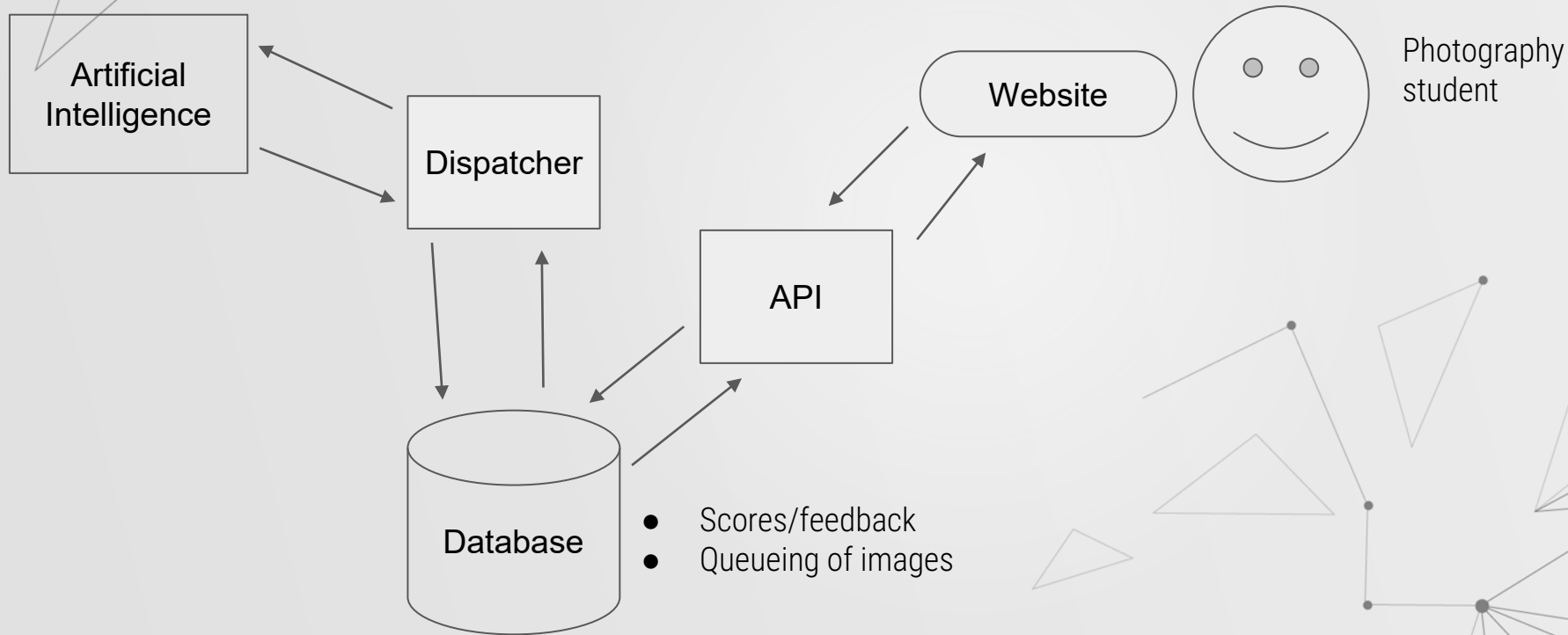


Using AI in Photography at The Open University

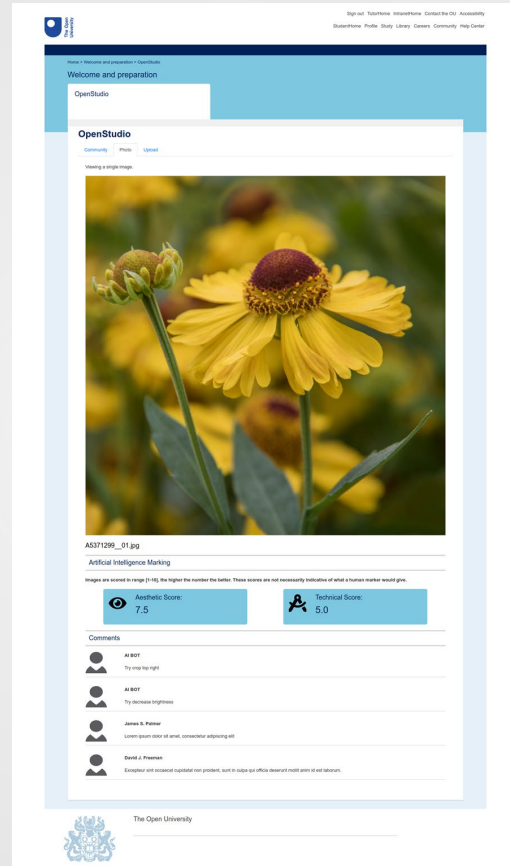
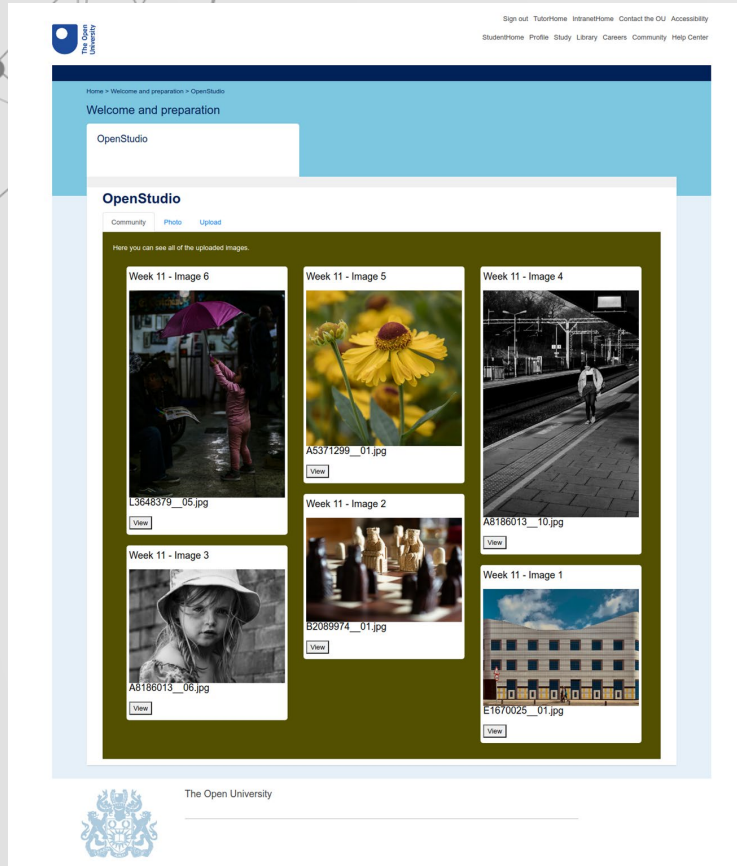
15th January 2021

Prof Stephen Peake (OU)
Future Learn Academic Network

Automatically scoring photographs

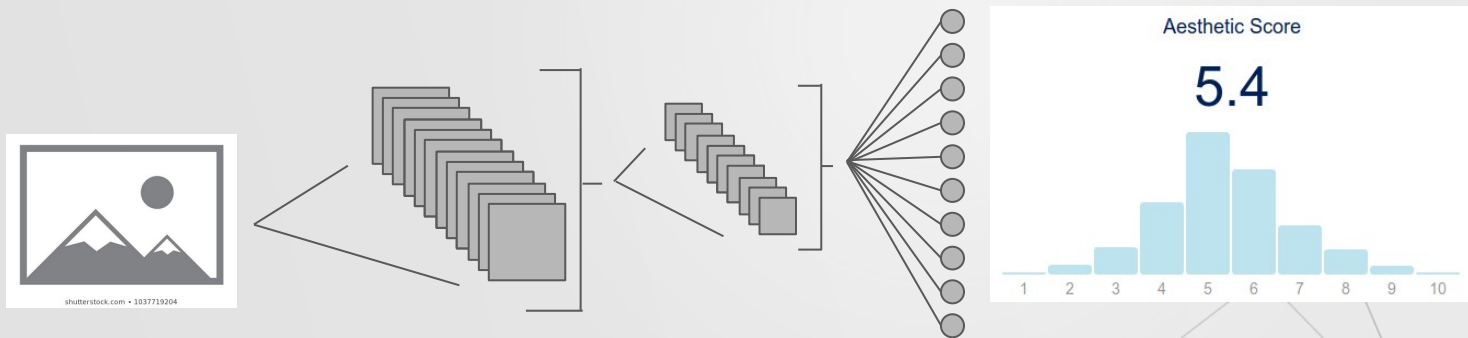


Front End



How Does it Work?

- Convolutional Neural Network (CNN) that predicts a probability distribution of scores for an image





How Does it Work?

- Trained on public datasets scraped from **photography competition** websites, with scores from other **amateur photographers**
 - Aesthetic-scores dataset
 - 255,000 images
 - Avg. 200 scores per image to produce a distribution
 - 900 different themed competitions
 - Technical-scores dataset
 - 25 source images
 - 24 distortions with 5 levels of distortion for each image
 - Each image rated 9 times to produce a score
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Results So Far

- We have a model that can reasonably well predict scores for the training datasets
 - We adapt the range of scores from the AI to be more similar to OU markers
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Continuation

- We would like to fine-tune the models using OU student images and scores from OU markers in the future
 - We are experimenting with ways to provide feedback about how to improve an image
 - We want to add a feedback loop so that the system continuously learns from uploaded images.
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Why?

- To be the first time that cutting-edge AI has been used to provide quality feedback about student work
 - To allow students to get real-time visual and technical feedback on their photographs
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Discussion

