Introducing DVLA’s Emerging Tech Lab

The team

I lead DVLA’s Emerging Tech Lab, and I’m joined by a technical lead and three developers.

Two of our developers are on DVLA’s Masters Level Apprenticeship Programme. As well as exploring how we can make use of modern cloud platforms and technologies, they have also spent time studying for a masters degree in Software Engineering at Swansea University. Now back in the workplace, they are putting their new skills to use.

What we do

We use new and emerging technologies to solve problems set by the business. We do this by developing proof of concepts (PoC), which means we test a concept or theory to see if it has the potential to be turned into reality. At the end of each project we produce a working PoC, and share with our colleagues what we’ve done and what we’ve learned along the way.

Our first project

We realised a lot of people start their journey with us by applying for a driving licence. As part of the application process, we ask you for a passport photo which then gets printed on your driving licence. Our clerks must check each photo conforms to the passport photo criteria.

The process of checking each photo is time consuming and we wondered if we

could train a machine to take on this task. The answer was yes and, after some research, we built our own machine learning model to do this.

Teaching begins

We taught the model what acceptable and unacceptable photos look like.

To do this we took photos that conformed to the passport photo criteria and ones that didn’t, and tagged these as either acceptable or unacceptable. Capturing the acceptable images was straightforward, but we had to get creative with the unacceptable images. Dolls, figurines and even snapchat filters featured in these!

The moment of truth

After uploading the tagged images we left the machine to learn. After just a few minutes, it told us it was ready and invited us to test it. We fed in a selection of new images and waited… our machine passed with flying colours, a great result!

What’s next?

We’ve got a full backlog of ideas to explore using technologies such as artificial intelligence, augmented reality, chatbots and more challenging machine learning use cases. So we’re going to be pretty busy over the next few months.

To find out more

You can read about what it’s like to work at DVLA and take a look at our latest vacancies on Civil Service jobs.

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