

Deep Learning - image recognition

2-Liner description: We want you to build image recognition agent that is capable of recognizing the mortal Kombat character while it is being used real-time in a game of mortal Kombat.

[Description of the assignment]

- At ToThePoint we like to build proof of concepts based on gamification. So we've built an arcade cabinet from scratch by ourselves with machine learning capabilities using IoT.
- We trained a machine learning model that can predict which game is being played on the machine solely through button and joystick usage data.
- Once deployed in the cloud, this model is able to make real-time predictions while somebody is playing on the machine using stream processing. We started capturing data of the button and joystick usage while gaming. Thus our fun project ToTheArcade was born.

[Goals]

- At this moment we can make predictions on 8 games that rank the highest looking at popularity.
- One of those games is Mortal Kombat. We would like to measure to popularity of each character so that we can build a profile of the user that is currently playing the game.
- We want you to build image recognition agent that is capable of recognizing the mortal kombat character while it is being used real-time in a game of mortal kombat.
- This character recognition can then be used as extra feature in our global solution of our PoC.

[What will you gain]

- The result of the exercise is a methodology, model and production ready agent that can be used for other games (e.g: streetfighter) using transfer learning.
- The project can be extended on other games and scores to build up a profile of the user currently playing.

[What do you need]

- Creativity and the will to succeed
- A motivated personality to keep pushing until you find the right solution
- You'd love to see hardware and software working together
- You love to explore real-time data and stream processing
- You acknowledge that an exciting time is ahead with machine learning applications
- You're looking forward to learning a heck of a lot in a relatively short time period

[Technologies you'll be using]

- Machine Learning
- Python
- Java
- Deep learning framework (e.g. tensorflow, keras...)
- Other:
 - Apache kafka
 - Kubernetes
 - Docker
 - Flask - Rest API