TensorFlow Challenge: Book Depository

Here at TFC, we are big believers in learning by doing! To help you master Machine Learning in TensorFlow, we devised a challenge to get started. Are you up for it?

This challenge has something for everyone, but if you're a beginner, there's no need to worry. We provide you with the knowledge you need to get started and power your way to a successful solution.

This challenge is designed to be difficult. It's similar to those you'll face in the TensorFlow Developer Certificate exam, which is why you shouldn't feel discouraged if you face some roadblocks. But if you get stuck, the TFC team is available to steer you in the right direction.

The good news is, if you can crack this one, you're on the right track to becoming a TensorFlow Certified Developer!

About the challenge

Congratulations, you're BookDepository's newest data scientist! They hired you to create an image classifier to categorize all new books based on their covers. It's now up to you to create the book classifier using TensorFlow 2.0 (Keras API) and Transfer Learning.

This challenge will test your knowledge and application of Transfer Learning and image classification.

Are you ready to get started? Below you'll find everything you need to build up your knowledge of Transfer Learning, Image Classification, and TensorFlow. After learning the theory, you can dive right into the challenge, and if you get stuck, don't hesitate to reach out to the TFC team. And finally, once your solution is complete, submit to the team!

Step 1: Build Your ML and TensorFlow Knowledge

This challenge is tough. To prepare yourself to solve it, dive into these downloads and cheatsheets to help you develop the necessary knowledge and confidence to crack this problem for BookDepository!

Master the concepts below and you'll be all set:

TensorFlow 2.0 Practitioner Cheatsheet
(https://tfc-platform.s3-us-east-2.amazonaws.com/uploads/tf-2-practitioner-cheatsheet.pdf**)**

- How to scale data using TensorFlow 2.0.
- Divide datasets into training and testing.
- Build ANN & CNN.

TensorFlow 2.0 Practitioner Advanced Cheatsheet
(https://tfc-platform.s3-us-east-2.amazonaws.com/uploads/tf-2-practitioner-advanced-cheatsheet.pdf**)**

- Build CNN & RNN
- Apply Transfer Learning. Build Autoencoders.
- Apply Deepderam & GANS

Step 2: Solve the Challenge

You're now ready to sink your teeth into this challenge. Download the dataset via the link below:

[Download Dataset Here]

and

[Start the challenge]

Step 3: Need Help? Contact the TFC Team

Feeling stuck? No worries, reach out to the TFC team by contacting us at support@tfcertification.com. We're always available to help!

Step 4: Submit Your Solution

Congratulations! You completed the challenge. Now it's time to submit it. You can do so by following the instructions below:

1. First, please add the title in the following format and save your notebook as:
    a. Your name + TF Challenge.ipynb
2. In your Colab notebook please go to the top right of the page and select the share option.
3. This will then open an option to share it with an email:

    Share with people and groups

    In this prompt please share the Colab notebook with support@tfcertification.com. Please also allow us to either be an editor or commentor so that we can run any cells needed to examine the challenge.

Once this is complete we will be able to evaluate and examine the Colab file. If you have any questions about the sharing process, or any issues please let us know through support@tfcertification.com.

Please acknowledge, that this is not an easy challenge, but you will learn everything that is required to complete the challenge and pass the exam with our **TensorFlow Developer Professional Certificate Course**

Good Luck!