



## Introduction to the course

- ✓ **Video:** Welcome to Probabilistic Deep Learning with TensorFlow 2  
2 min
- ✓ **Reading:** About Imperial College & the team  
10 min
- ✓ **Reading:** How to be successful in this course  
10 min
- ✓ **Reading:** Grading policy  
10 min
- ✓ **Reading:** Additional readings & helpful references  
10 min
- 📝 **Discussion Prompt:** Introduce yourself  
10 min
- 📄 **Pre-Course Survey**  
15 min
- ▶ **Video:** Interview with Paige Bailey  
7 min
- ▶ **Video:** The TensorFlow Probability library  
2 min
- 📋 **Practice Quiz:** [Knowledge check] Standard distributions  
6 questions

## Univariate distributions

## Multivariate distributions

## The Independent distribution

## Broadcasting rules

## Sampling and log probs

## Trainable distributions

## Programming Assignment:

## Naive Bayes and logistic regression



# Additional readings & helpful references

Below you find a selection of additional material for you that may be helpful to keep alongside the course.

Please note that this material is optional and not intended as integral part of the course.

## Books

Aurélien Géron - Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 2nd Edition, O'Reilly Media, Inc., 2019.

Francois Chollet - Deep Learning with Python, Manning Publications, 2017.

Oliver Dürr, Beate Sick, Elvis Murina - Probabilistic Deep Learning With Python, Keras and TensorFlow Probability, Manning Publications, 2020.

Cameron Davidson-Pilon - Bayesian Methods for Hackers: Probabilistic Programming and Bayesian Inference, Addison-Wesley Data & Analytics, 2015.

## Web Resources

For a review of the field of deep learning:

<https://www.deeplearning.ai/deep-learning-specialization/>

For a review of Bayesian methods used in machine learning:

<https://www.coursera.org/learn/bayesian-methods-in-machine-learning>

For a general introduction to probability theory:

Sheldon Ross - A First Course in Probability. ISBN 9780321794772, Pearson Education, Incorporated, 2014.

✓ Complete

Go to next item