Going further with Machine Learning

Now that we finished the first part of the course, it is time to apply all the Machine Learning concepts to real TinyML applications. But before, let's try to help the students that would like to learn more about ML (Note that going deeper is not necessary for the TinyML course). The suggestions below are regarding online courses that are offered mainly by Coursera, EDX, and Kaggle. All courses can be done for free (w/o certificate).

Python

First of all, everything starts with Python. Learning Python is not just a prerequisite for getting into machine learning, but it's an investment that will help your career for the rest of your life. The [Python for Everybody specialization](#) offered by the University of Michigan is a great course. The specialization has 5 courses:

- Getting Started
- Data Structures
- Accessing Web Data
- Using Databases
- Retrieving, Processing, and Visualizing Data

Another great course (in Portuguese) is:

- [Introdução à Ciência da Computação com Python Parte 1 e 2](#)

Machine Learning

Probably the most popular Machine Learning course in the world is [Machine Learning](#). With more than 4 million people enrolled, the course is taught by Andrew Ng and offered by Stanford University. This is not a course to focus on writing code but theory. The course covers the essential aspects of classical machine learning:

- Linear and Logistic Regression
- Regularization
- Neural Networks
- Support Vector Machines
- Dimensionality Reduction
- Anomaly Detection

- Recommender Systems

Kaggle also has elementary and short courses about ML:

- [Intro to Machine Learning](#) and
- [Intermediate Machine Learning](#)

Deep Learning

The best [Deep Learning Specialization](#) is also taught by Andrew Ng and offered by DeepLearning.AI
There are 5 courses on this specialization:

- Neural Networks and Deep Learning
- Hyperparameter Tuning, Regularization, and Optimization
- Structuring Machine Learning Projects
- Convolutional Neural Networks
- Sequence Models

Kaggle also has a straightforward and short course about [Intro to Deep Learning](#)

TensorFlow

Again, the most complete course about TensorFlow is found at DeepLearning.AI: [TensorFlow Developer Professional Certificate](#). This specialization has 4 individual courses:

- Introduction to TensorFlow
- Convolutional Neural Networks
- Natural Language Processing
- Sequences, Time Series, and Prediction