

# TensorFlow for Deep Learning

## Bootcamp:

Notes taken for the **TensorFlow for Deep Learning Bootcamp**, by **Zero to Mastery**.

Notes taken by Travis Rillos. These notes and all app code and practice code organized in the following Github repository:

[https://github.com/xroadtraveler/tensorflow\\_for\\_deep\\_learning\\_bootcamp](https://github.com/xroadtraveler/tensorflow_for_deep_learning_bootcamp).

### **Other Course Resources:**

Course Github repository: <https://github.com/mrdbourke/tensorflow-deep-learning>

Online Book: <https://dev.mrdbourke.com/tensorflow-deep-learning/>

### **Zero to Mastery Resources:**

Website: <https://zerotomastery.io/>

YouTube: <https://www.youtube.com/@ZeroToMastery>

LinkedIn Group: <https://www.linkedin.com/groups/12121940/>

**Discord Server:** @ZeroToMastery

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# Section 1 – Introduction:

## Course Outline:

- Just an overview.
  - There are **18 Sections**.
  - End goal is to pass Google’s TensorFlow exam.
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- In this video, the order we’ll be focusing on things appears to be:
    - **TensorFlow Fundamentals**,
    - A **NumPy** and **Pandas** section,
    - A **Machine Learning Primer**,
    - Setting up a **Developer Environment** (Jupyter Notebook),
    - **Neural Network Regression**,
    - **Neural Network Classification**,
    - **Convolutional Neural Networks** (including Computer Vision),
    - **Transfer Learning**,
      - This is where we start building real-world projects.
      - The first project is called “Food Vision”.
    - **Natural Language Processing (NLP)**,
      - How LLM’s are made.
      - We’ll create a project called “SkimLit”.
    - **Time Series**,
      - We’ll create a project called “BitPredict”.
    - And finally, **TensorFlow Certification**.



### Join Our Online Classroom:

- Mostly a plug for the Discord server. A private link to the channel is provided in the following page. I won't post that to the notes, in respect for their course.
- Once I finish the course, I can post my certificate to their "Alumni Section".
- **Note:** The link wants me to set up a new account that's separate from my existing Discord account? I wonder if I can work around this...
  - I was able to manually enter the invite link into my mobile app.

### ZTM Resources:

**Website:** <https://zerotomastery.io/>

- The community section on the website (<https://zerotomastery.io/community/>) contains additional resources including **Coding Challenges**.
- It also contains **Open Source Projects**.
- There are other things, but I was less interested in them.
- 
- There's also a very useful tab containing a multitude of **Cheat Sheets**.
- Another useful section involves advice on **Career Paths**.

## Section 2 – Deep Learning and TensorFlow

### Fundamentals:

What is Deep Learning?:

- A
- A
- A
- A
- A
- A
- A
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## Template: Code Box:

```
def weather_condition(temperature: float) -> str:
    if temperature > 7:
        return "Warm"
    elif temperature <= 7:
        return "Cold"
    else:
        return "Invalid input. Please enter a number."

user_input = float(input("Enter temperature: ")) <<<
print(weather_condition(user_input))
```

```
from tkinter import *

window = Tk() <<< Create window

l1 = Label(window, text="Title") <<< Create labels
l1.grid(row=0, column=0)

l2 = Label(window, text="Author") <<<
l2.grid(row=0, column=2)

l3 = Label(window, text="Year") <<<
l3.grid(row=1, column=0)

l4 = Label(window, text="ISBN") <<<
l4.grid(row=1, column=2)

window.mainloop()
```