Artificial Neuronal Networks and Deep Learning

Course Overview

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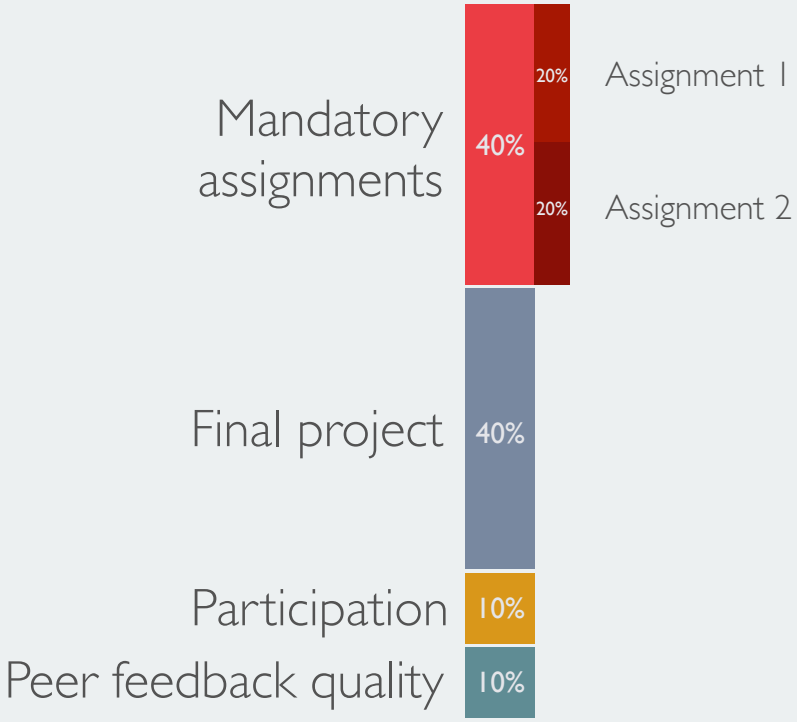
Sessions

1. Intro to ML + Logistic Regression + Feed Forward NN
2. How a NN works: cost functions, gradient descent, back propagation
3. Overfitting, regularization, getting started with Keras
4. Convolutional Neural Networks (CNNs)
5. Recurrent Neural Networks (RNNs)
6. Transfer learning
7. Generative Models: GANs and VAEs
8. Project work/supervision
9. Project work/supervision
10. Project presentations

How will you be assessed?

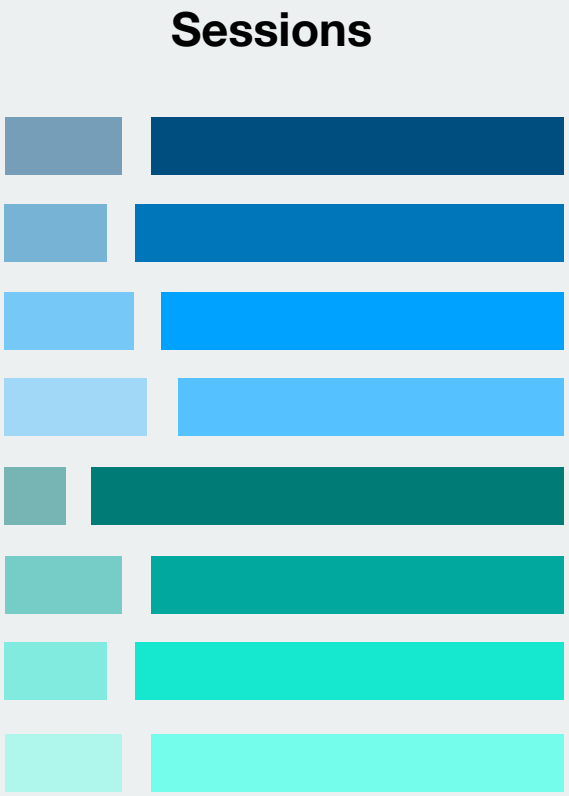


How assignments work

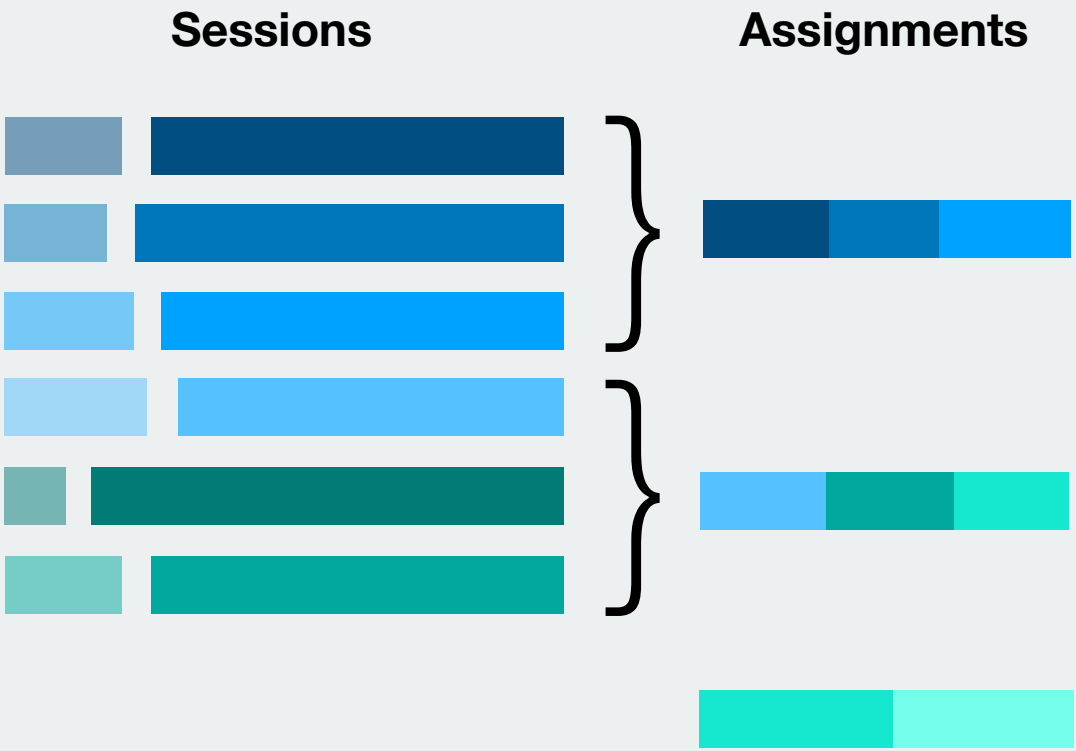
Sessions

Talk **Solve exercises**

How assignments work



How assignments work



The final project

Nov. 3

I validate your project idea

Part A Nov. 10

You present a proposal video

Deliverable

Part B Nov. 30

You deliver a blog post and your code

Deliverable

December 1

You give a presentation

Previous students projects

“Tweet generation with Neural Networks: LSTM and GPT-2”

“Recommending New Music with Neural Networks”

"Font Generation with Variational Autoencoders"

How to do well in this course

Best strategy:

1. Complete the *preparation goals* for each session (see wiki)

2. Be inquisitive. Ask lots of questions to your neighbors and me, and up your googling-game

Everything else is on Canvas