



Nov 23, 2020

**Amany Mou'nes Mahmoud**

has successfully completed

**Improving Deep Neural Networks: Hyperparameter  
tuning, Regularization and Optimization**

an online non-credit course authorized by DeepLearning.AI and offered through Coursera

A handwritten signature in blue ink, reading "Andrew Ng".

Adjunct Professor Andrew Ng  
Computer Science

**COURSE  
CERTIFICATE**



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participation in the course.