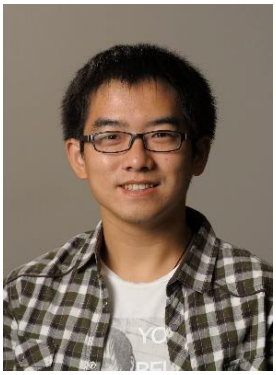
Texas A&M Institute of Data Science Tutorial Series

TEXAS A&M Institute of Data Science

Introduction to Generative Adversarial Networks



Generative adversarial networks (GANs) have been prevailing since its origin, and continue to be one of the hottest research frontiers. Their most notable success lies in generating or manipulating realistic natural images, while more interdisciplinary applications are being explored. The purpose of this tutorial is to give a broad introduction to the field. The speaker aims to first discuss the mathematical formulation and theoretical understanding of GANs. The speaker will then explain a series of practical research problems in GANs, including architecture design, loss function and regularizations, training algorithms and tricks, evaluation metrics, and pitfalls. The talk will be concluded with a tour of its extensive applications, as well as a reflection on the current gaps.

The tutorial workshop consists of two one-hour lecture style sessions with a short break in between. There is no hands-on session in this workshop but ample examples will be used to facilitate understanding in the lecture. Registration is not needed.

Background knowledge advisable: Participants should have at least a basic understanding of undergraduate level probability and linear algebra. Some background in deep learning and computer vision is helpful but not required.

Zhangyang "Atlas" Wang, Ph.D.
Assistant Professor
Dept. of Electrical & Computer Engineering
The University of Texas at Austin

Date: Friday, November 20
Time: 1:00 – 3:00 p.m. US Central Time
Meeting ID: 998 4499 3279
Passcode: 724615
Faculty host: Yu Ding, TAMIDS

Biography

Dr. Zhangyang "Atlas" Wang is currently an Assistant Professor of Electrical and Computer Engineering at UT Austin. He was an Assistant Professor of Computer Science and Engineering at Texas A&M University from 2017 to 2020. He received his Ph.D. degree in ECE from UIUC in 2016; and his B.E. degree in EEIS from USTC in 2012. Dr. Wang is broadly interested in the fields of machine learning, computer vision, optimization, and their interdisciplinary applications. His latest interests focus on automated machine learning (AutoML), learning-based optimization, machine learning robustness, and efficient deep learning. His research is gratefully supported by NSF, DARPA, ARL/ARO, as well as a few more industry and university grants. Dr. Wang has also received many research awards. He leads the VITA research group (https://vita-group.github.io).

You can also click this link to join the seminar https://tamu.zoom.us/j/99844993279?pwd=TkJodWFVRURyMmkwakI4SWZGeVJTQT09

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For more information about TAMIDS tutorial series, please contact Ms. Jennifer South at jsouth@tamu.edu