CHALLENGE #8
ERAU-LEARN-02

Data-Efficient Machine Learning
Meet the expectations of this US Node through the technology challenge described below

APPLY NOW

GOALS

Many recent efforts in machine learning have focused on learning from massive amounts of data resulting in large advancements in machine learning capabilities and applications. However, many domains lack access to the large, high-quality, supervised data that is requires and therefore are unable to fully take advantage of these data-intense learning techniques. This necessitates new data-efficient learning techniques that can learn in complex domains without the need for large quantities of supervised data.

DETAILS

This topic focuses on the investigation and development of data-efficient machine learning methods that are able to leverage knowledge from external/existing data sources, exploit the structure of unsupervised data, and combine the tasks of efficiently obtaining labels and training a supervised model. Areas of interest include, but are not limited to: Active learning, Semi-supervised learning, Learning from "weak" labels/supervision, One/Zero-shot learning, Transfer learning/domain adaption, Generative (Adversarial) Models, as well as methods that exploit structural or domain knowledge. Furthermore, while fundamental machine learning work is of interest, so are principled data-efficient applications in, but not limited to: Computer vision (image/video categorization, object detection, visual question answering, etc.), Social and computational networks and time-series analysis, and Recommender systems.

SKILLS REQUIRED

A basic understanding of Machine Learning.

F6S   zabala innovation consulting   AUSTRALO