# Advancements in Deep Learning and Deep Federated Learning Models

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## Message from the Guest Editors

Dear Colleagues,

With the advancements in multimedia technologies, artificial-intelligence-based imaging applications have gained significant attention from computational researchers. However, deep learning techniques still suffer from issues associated with over-fitting, data leakage, and hyper-parameters tuning. To overcome the problem of over-fitting, many researchers have utilized ensemble and federated (collaborative) learning techniques. However, federated learning suffers from the location privacy of the participants. Therefore, some researchers have utilized homomorphic encryption and blockchain techniques to provide security to the participants of federated learning models. Additionally, some researchers have utilized metaheuristic techniques to optimize the hyper-parameters of the deep learning and federated learning models. However, the selection of hyper-parameters is still an open area of research. Therefore, this Special Issue deals with those techniques that utilize imaging datasets to build artificial intelligence models. Advancements in deep learning and deep federated learning models will also be considered.

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Special Issue

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## Message from the Editor-in-Chief

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