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Post Cisco, Makarand has been working for indigenous wireless and network technology companies with a mission to make the wireless technology products in India

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Using ns3 for Generating Synthetic Data in Cellular Networks

Like every other field, cellular communication too is embracing the new frontiers opened by AI/ML advancements. This is, however, fraught with difficulties – ML needs data and such a data is not readily available due to several reasons. In such a case, a realistic network simulator, like ns3, can play an important role in terms of generating relevant data for training the models as well as in validating the inference. This opportunity has already been spotted by several groups in academia and now being actively pursued in industry too. However, ns3 poses challenges while scaling to large scale network simulations as well as in terms of integration with several other commonly used tools. The talk focuses on bringing out these aspects of ns3 so that it can become the de-facto system simulator for wireless communication networks. We also explore certain specific use cases and examples where such data generation has been found to be useful.

Keywords: Cellular, model training, simulation, AI/ML, scaling