

[Sample] Project List

(using 5G-Toolkit)



Non-exhaustive List of B.Tech/ M.Tech Projects Using 5G-Toolkit

1. Equalization and De-mapping in 5G and Beyond Networks
2. SU-MIMO Precoder Design in 5G and Beyond Networks
3. MU-MIMO Precoder Design in 5G and Beyond Networks
4. Beam-selection in 5G and Beyond Networks
5. Channel Estimation in 5G and Beyond Networks.
6. Downlink Synchronization using SSB in 5G and Beyond Networks
7. Uplink Synchronization using PRACH in 5G and Beyond Networks
8. Analog, Digital and Hybrid Beamforming in 5G and Beyond Networks
9. Device Localization based on time measurements in 5G and Beyond Networks
10. Device Localization based on angle measurements in 5G and Beyond Networks
11. Device Localization based on carrier phase in 5G and Beyond Networks
12. Resource Allocation in 5G and Beyond Networks
13. Scheduler Design in 5G and Beyond Networks
14. Uplink and Downlink Power Control in 5G and Beyond Networks
15. Channel codes design for data, control, and broadcast channels in 5G
16. Pilots design for uplink and downlink sounding in 5G and Beyond Networks
17. Coverage analysis and enhancement in 5G and Beyond Networks
18. Drone communication in 5G and Beyond Networks
19. Vehicle to everything communication in 5G and Beyond Networks
20. 5G and beyond non terrestrial networks
21. Time of arrival based Deep learning methods for Position Estimation in 5G Networks
22. Angle of arrival/Departure based Deep learning methods for Position Estimation in 5G and Beyond Networks
23. Learning to De-map the symbols in 5G and Beyond Networks
24. AI based adaptive power control in downlink/uplink for 5G and Beyond Networks
25. Channel Quality Indicator prediction using RNN in 5G and Beyond Networks
26. Proactive handover prediction using reinforcement learning in 5G and Beyond Networks.
27. Learning to decode the Polar code in 5G and Beyond Networks.
28. Learning to decode the LDPC code in 5G and Beyond Networks.
29. Site specific constellation learning in 5G and Beyond Networks.
30. Site specific Joint constellation mapper and de-mapper learning for in 5G and Beyond Networks.
31. Deep learning-based modulation order estimator for 5G and Beyond Networks.
32. DnCNN based PBCH decoding in 5G and Beyond Networks.

