

Orbital systems
 Launchers
 Satellites
 Transversal competencies



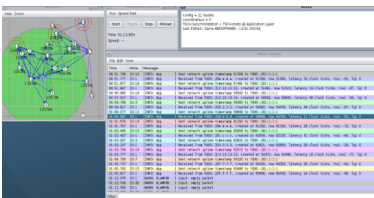
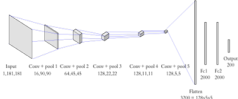
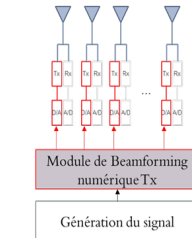
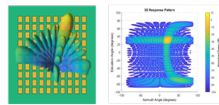
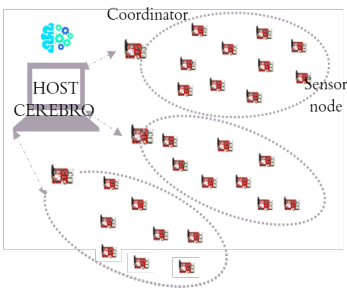
ARKANE is a French cutting-edge innovative company co-founded by two PHDs in Telecommunication in 2020 at the ENSTA Bretagne Business Incubator. ARKANE specializes in using AI-empowered solutions for Telecommunication systems.

ARKANE develops advanced Machine Learning Techniques to solve complex tasks for IoT protocols and Radar and Smart Antenna signal processing.

COMPETENCIES & CAPABILITIES

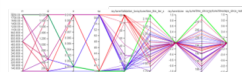
ARKANE designs algorithms for IoT protocols and Radar and Antenna digital processing.

ARKANE Machine Learning Models tackle the routing and scheduling protocols for 6LowPAN Networks, Antenna Digital Beamforming and Radar Target detection, tracking and classification.



```

1  # Import the necessary modules
2  import numpy as np
3  import matplotlib.pyplot as plt
4  import networkx as nx
5  import random
6  import time
7  import sys
8  import os
9  import math
10 import logging
11
12 # Set the logging level
13 logging.basicConfig(level=logging.INFO)
14
15 # Create a graph
16 G = nx.Graph()
17
18 # Add nodes
19 for i in range(1, 10):
20     G.add_node(i)
21
22 # Add edges
23 for i in range(1, 10):
24     for j in range(i+1, 10):
25         G.add_edge(i, j)
26
27 # Simulate the network
28 # ...
29
30 # Print the results
31 print("Simulation results:")
32
33 # End of the simulation
34
    
```



ARKANE

PRODUCTS & SERVICES

- CEREBRO an AI-empowered IoT protocol for fast and reliable data collection in Wireless sensor networks for uses cases such as structural Health Monitoring and Assembly, Integration and Test. CEREBRO is an embedded ML software in a plug and play terminal that scans, builds and manages the data collection in a wireless sensor network.
- Deep Learning algorithms for Antenna Digital Beamforming as an alternative to usual Beamformers that have slow and heavy computation.
- Deep Learning algorithms for target identification, tracking and classification for radar applications working on complex radar data cubes.

MAJOR SPACE PROJECTS & REFERENCES

- CEREBRO a plug and play AI terminal for the SHM and AIT of future launch vehicles. Laureate of the CNES R&D challenge for future space transportation in 2020 & Laureate of the CNES AI for future transportation in 2022
- AITENNA for ML Antenna Beamformers of Telecommunication antennas. Laureate of the CNES AI for future transportation in 2022.
- ESA BIC Alumni & part of the ESA Space Hub.

POINT OF CONTACT

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TURNOVER < 1M€

WORK FORCE 2 to 5 employees

SPACE TURNOVER < 1M€

SPACE WORK FORCE 2 to 5 employees