
YAOZI
Infinite Innovation

Improving the Efficiency of LoRa IoT Devices that Communicate Directly with Satellites using Ambient Energy Management Systems and Artificial Intelligence Techniques

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YAZ

INTRODUCTION

- Aviation and aerospace engineering company focused on drone applications and developing software algorithms for satellite communication
- Founded by Yolanda Nxumalo, in 2019 with a BSc in Mechanical and Mechatronics engineering from UCT, and MEng candidate for Satellite Systems and Applications at CPUT
- Co-founder of the Digital and Drone Solution project

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Objectives

Who We are?

Brief overview of the history of YaAzi

Introduction

To the three key technologies:

- LoRaWAN
- HESS
- AI

Overview

How the integrated technology works

Benefits

How the integrated technology will benefit industries

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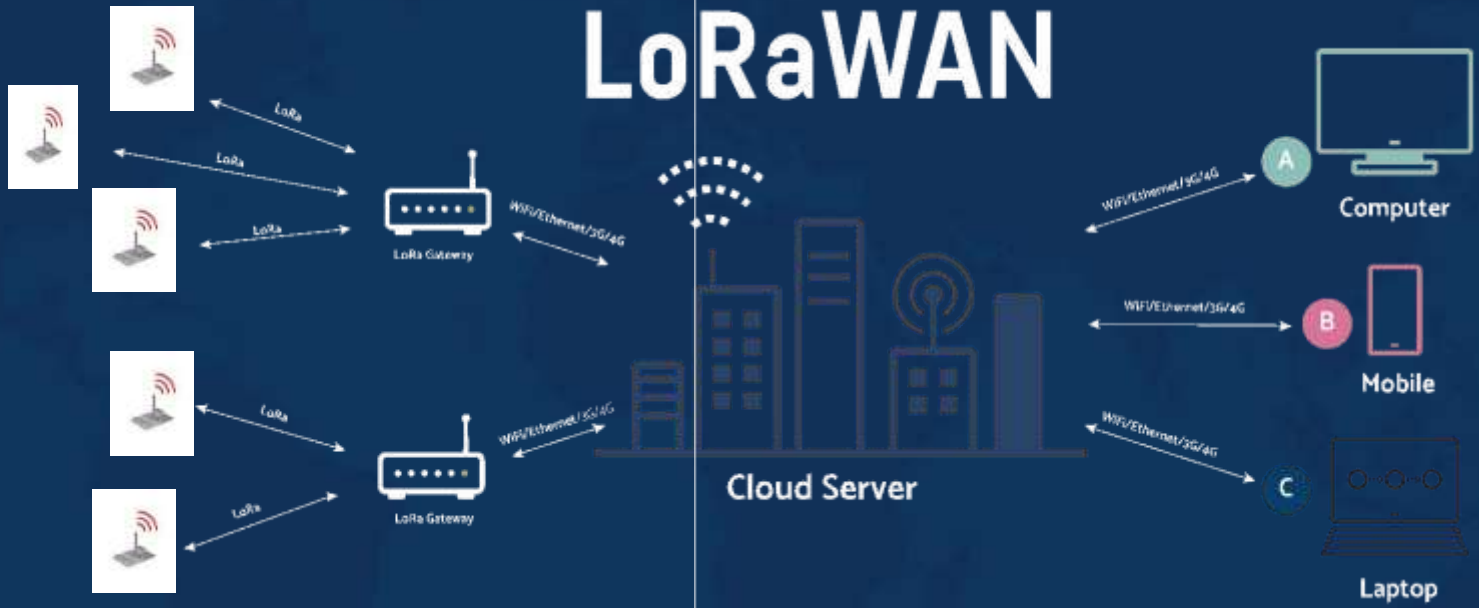
LoRaWAN



A Spreading factor

B Power consumption

C Channel occupancy rate

C Distance between gateways

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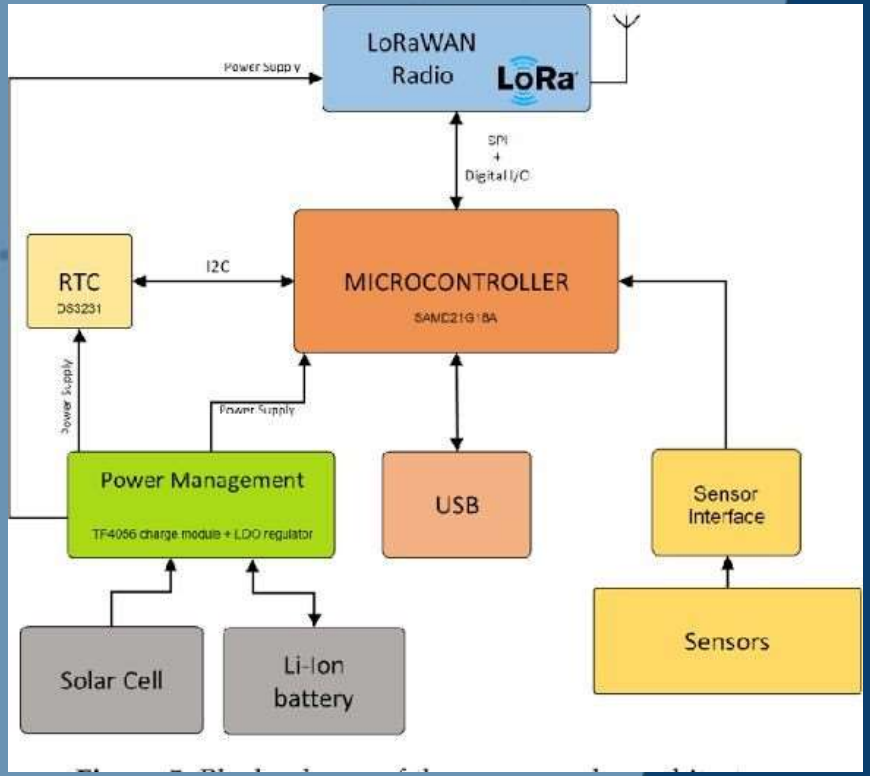
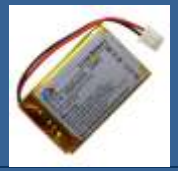
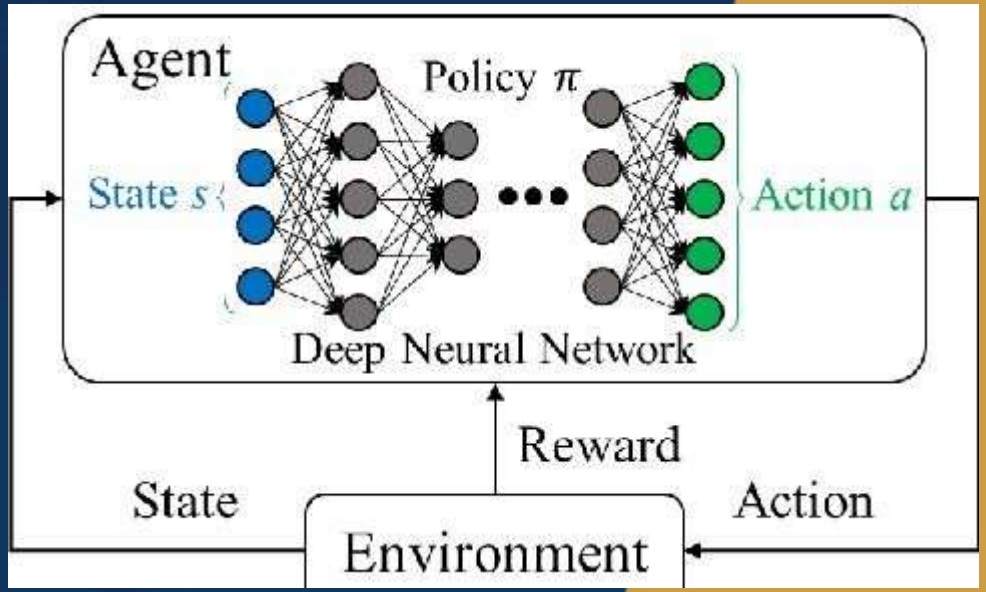
Ambient energy management



Hybrid Energy Storage System

AI: Deep Reinforcement Learning



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Integrated system

- LoRa IoT node sends signal directly to low earth orbiting satellites that has a LoRa gateway and cloud server boarded on the satellite
- Data sent to Swarm ground station cloud server or AI powered application server for data analysis and advanced data analytics

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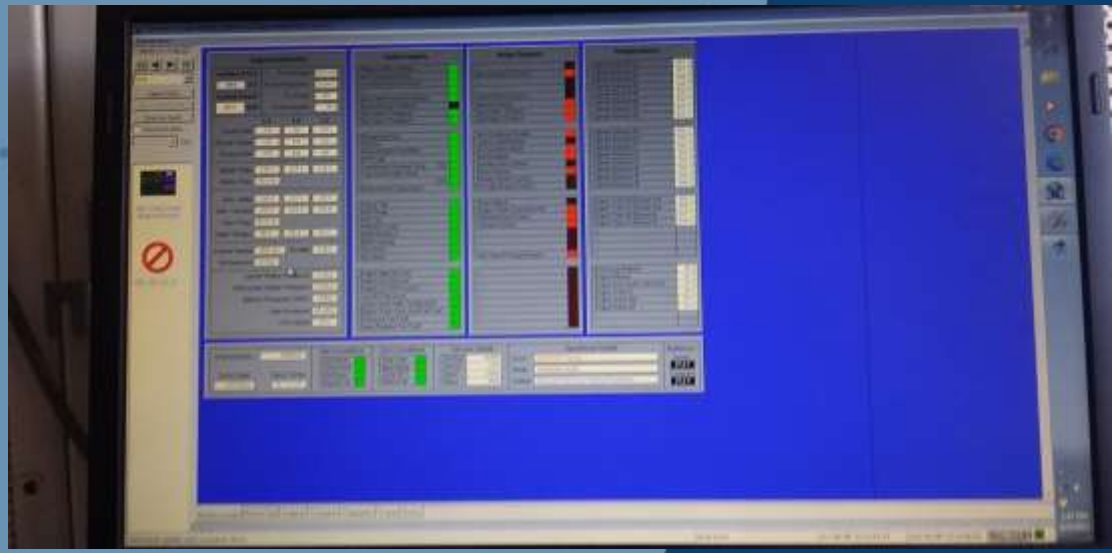
Energy industry

Power efficiency

Advanced data management and analysis



Digital healthcare

Medical adherence

Atom5™ is a disease and language agnostic technology platform that can remotely provide clinical assessments at scale

Smartphone

Customized assessments via the Smartphone, a mix active/passive data collection support continuous data capture outside of the clinic

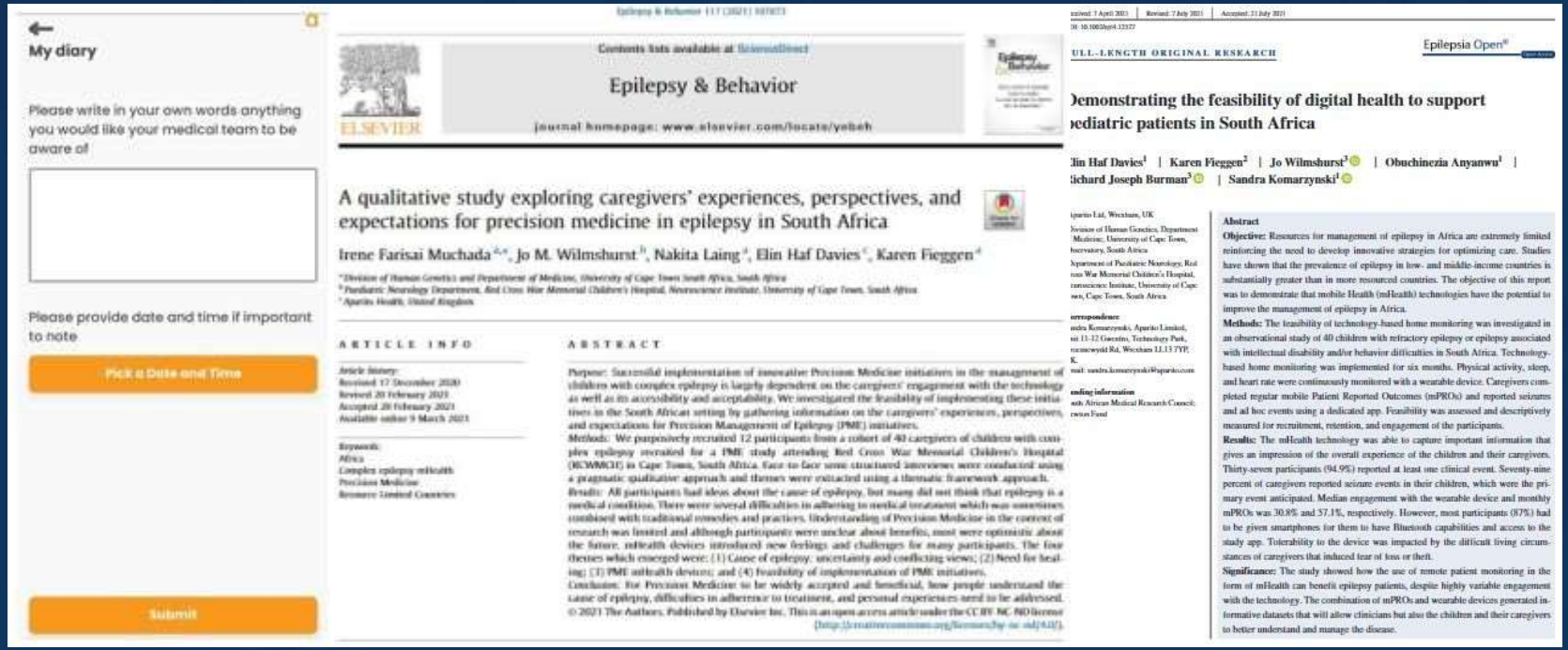
Video/Voice Capture

Unique video/voice capture technology with pattern recognition goes above and beyond traditional assessments

Wearables/Device

Integration with clinically validated wearables enable a wider range of passive data capture capabilities, producing unique digital endpoints

Improved patient outcomes

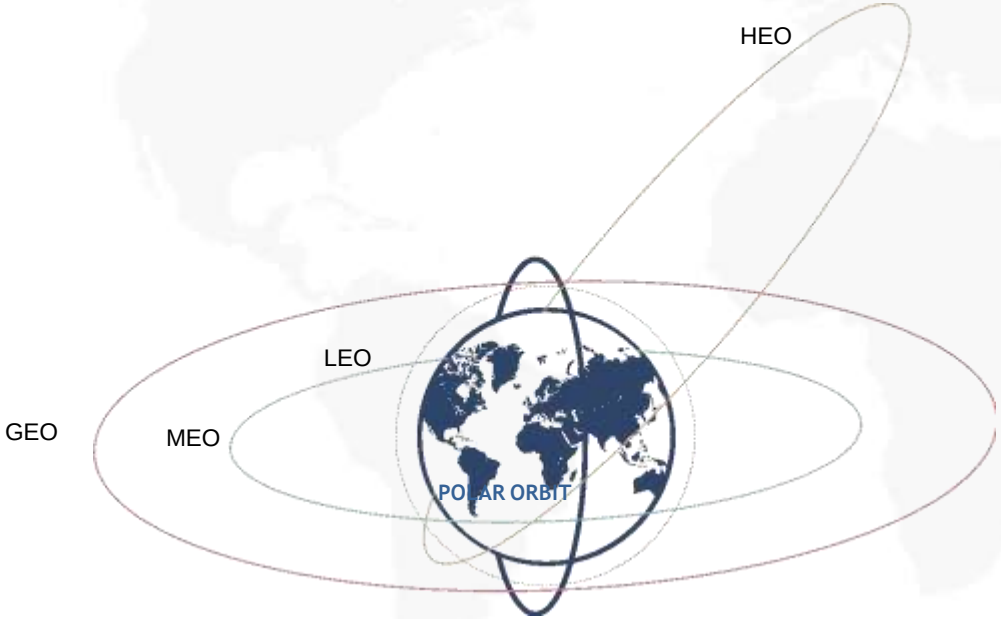


Environmental monitoring

Traction

Cape Peninsula University of Technology

sansa
SOUTH AFRICAN NATIONAL SPACE AGENCY


HEO
LEO
GEO
MEO
POLAR ORBIT