



atai Life Case Study

Meet the Team



Victoire Djimna

Data scientist at Ishango

Bachelor in Mechatronics and Automation

Ecole Nationale Supérieure Polytechnique de Douala

Masters in Data science and Artificial Intelligence

AIMS-CAMEROON

"During my time at atai Life, I had the opportunity to predict depression levels in patients and customise treatment plans for faster recovery. This experience was incredibly fulfilling as I gained valuable skills in mental disorders, their symptoms, and detection methods."

-Victoire Djimna

The Host Company



atai Life Sciences is a biopharmaceutical company that focuses on developing innovative treatments for mental health disorders. atai Life Sciences uses data and technology in drug development. They have a digital medicine division that uses advanced analytics and machine learning to identify new drug targets for mental health disorders.

Project Brief

The goal of the project was to classify patients' depression levels and understand sleep subgroups by analysing public data sets using machine learning and signal processing techniques. The project involved utilising passive monitoring systems based on actigraphy signals (e.g. fitbit, actigraph, apple watch) to identify sleep phenotypes and to understand to what degree depression symptoms can be monitored.



atai Life Case Study



"The objective of this project was to explore innovative ways to harness real world data for the advancement of depression patients' therapies and support technologies, and thanks to the collaboration with Ishango we gained insights beyond our expectations in a short period of time."

Dionisio Acosta-Mena

Director and Data Scientist at
atai Life

Project Outcome

The Ishango.ai team developed a supervised machine-learning model that predicts the severity of depression from actigraphy data (movement/sleep). Signal processing methods (Fourier transformations & wavelets) were used to increase the signal-to-noise ratio and improve model performance. Model performance using a gradient-boosting classification model reached an accuracy of 80% (f1 score = 0.81).

About Ishango

Ishango is an innovative social enterprise with a mission to create high-skill data science jobs in Africa. We recognise the potential in the best graduates and nurture their talent in line with business needs. Since our launch in 2021, we have connected budding data scientists from across Africa to projects around the world.



Employment

80% employment rate after fellowship



Diversity

40% of fellows have been women



Mentorship

1100+ hours of mentorship from senior data scientists