



Elder Research, Inc. Case Study

Meet the Fellows



Faith Neema Benson

University of Cape Town.
MSc. Mathematical Sciences
MSc. Machine Learning



Cyrille Feudjio

AIMS Cameroon
MSc. Industrial Mathematics
Industrial Engineering and
Physics

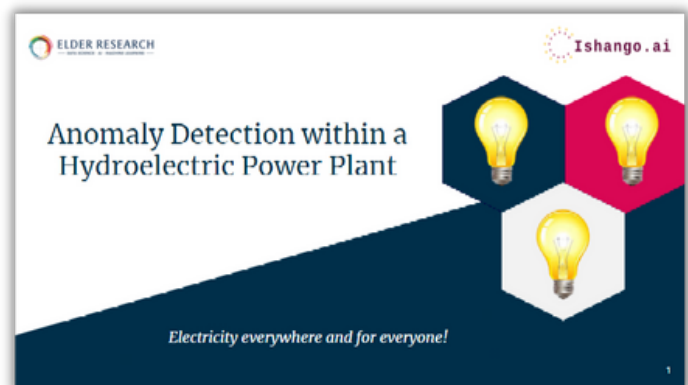
"The program has enabled me to strengthen my programming, critical thinking and problem-solving skills. It has also improved my presentation skills and sharpened my passion for learning new things." – Cyrille Feudjio

The Host Company

Elder Research, Inc. (ERI) is a machine learning solutions provider with 26 years of experience delivering high performing predictive modelling solutions into complex client deployment environments. They hand-craft innovative analytics solutions that inform decisions, deliver value, and transform organizations

Project Brief

Developing an unsupervised machine learning model to predict when parts are likely to fail within a hydroelectric power plant. Automation of these methods and raising alerts to clients, will help to better schedule timely maintenance.





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"The value we are hoping to get is in their in-process work on a cutting-edge neural network implementation in Python. While the final product isn't deliverable yet, they've made visible steps toward success, and in the modeling phase they've done faster than I expected. It looks as though we will finish this fellowship with an example of the model we can use to build it into pipelines."

Jericho McLeod

**Data Scientist at Elder
Research**

Project Outcome

- With messy data coming from sensors, Faith and Cyrille applied processing steps to prepare the data for modelling. The first was a data quality check with GreatExpectations - essentially "Data Unit Tests" that surface any issues in the data.
- Then they used a data augmentation technique to generate enough data to train a deep learning model.
- Finally, the model used and deployed into a production environment is a multivariate LSTM Auto-Encoder.

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