

# Otsogile Ogaisitse Onalepelo (Morena)

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## WORK EXPERIENCE

**Toro Clinic**, Palapye, Botswana

Jan 2018 – Present

*Chief Technology Officer*

- In charge of research, technological development, information and technological strategy formulation.
- Developed and maintains the clinic's web-based hospital information management system, called Recosoft, utilized offline. Recosoft helps the facility fine-tune its marketing strategies to ensure a ROI by analyzing and evaluating them using KPI's and acted upon using reports generated by reporting dashboards I developed and embedded into Recosoft.
- Developed and maintains the clinic's website accessible online at <https://toroclinic.com/>. The website plays a vital role in the clinic's digital marketing and transformation strategy as it is search engine optimized and it makes it easy for clients to schedule appointments online.

**Always Open Clinic**, Gaborone, Botswana

July 2016 – December 2016

*Information Technology Intern*

- Responsible for troubleshooting and fixing IT-related issues in the clinic.
- In charge of developing and implementing a web-based patient queue management system called Queue Master.
- Queue Master facilitated meaningful use of data generated from patient registrations, which was impractical before its implementation as the facility utilized traditional methods (pen and paper) for patient registrations. It makes it easy to allocate resources and budget, formulate policies, monitor and evaluate them, and generate collection ratio reports.

## EDUCATION

**University of Electronic Science and Technology of China**, Chengdu, People's Republic of China

June 2021

*Degree: Master of Engineering in Biomedical Engineering*

*Specialization: Bioinformatics & Machine Learning*

**Botho University**, Gaborone, Botswana

January 2018

*Degree: Bachelor of Science (Honors) in Health Information Management*

*Awards: 7 out of 9 Dean's List Awards; Best Student Award; Awarded a fully funded CSC master's degree scholarship.*

**University of YouTube**, Online, Self-Taught

May 2016 – Present

*Degree: Bachelor of Engineering in Software Engineering*

## PROJECTS

**COVID-19-CDD** (Skills: EDA,ETL,Python,ChEMBL,Pandas,NumPy,Matplotlib,Bioinformatics,SciPy,Seaborn,RdKit) – [Project Link](#)

- Conducted a computational drug discovery on FDA approved drug compounds in an attempt to find a compound or molecule that could inhibit the function of SARS-COV2(COVID-19). Mann-Whitney-Wilcoxon test was used to test for statistical significance, with a p-value threshold observed at 0.05. Some distribution results were statistically significant.

**Pneumonia-Prediction** (Skills: EDA,Python,FastAPI,React,Keras,TensorFlow,Pandas,NumPy,Seaborn,Matplotlib) – [Project Link](#)

- This is an end-to-end PWA and a convolutional neural network (CNN) project that classifies chest x-ray images of patients with lung disease (pneumonia) and those who do not have lung disease (normal). The model had a 0.90 AUC score, 0.91 Accuracy, 0.92 Precision, 0.94 Recall, and a 0.91 F1-score for class 0 (Pneumonia).

**Breast-Cancer-Classification** (Skills: EDA,UML,Python,FastAPI,React,Sklearn,Pandas,NumPy,Seaborn,Matplotlib) – [Project Link](#)

- An end-to-end PWA and a supervised machine learning (random forest) project which classifies patients' abnormal masses of cells (tumors) as either benign (non-cancerous) or malignant (cancerous). The model had a 0.99 AUC score, 0.99 Accuracy, 1.0 Precision, 0.97 Recall, and a 0.99 F1-score for class 0 (Cancerous Tumors).

**Insurance-Cost-Prediction** (Skills: EDA,UML,Python,FastAPI,React,Sklearn,Pandas,NumPy,Seaborn,Matplotlib) – [Project Link](#)

- Another end-to-end PWA and a machine learning (linear regression) project to predict the medical insurance cost of a person. The model yielded an R2 score of 0.79.

**Recosoft** (Skills: HTML,CSS,Bootstrap,JavaScript,jQuery,Ajax,MySQL,PHP,Xampp)

- It is an electronic medical records system that I developed and implemented first at Toro Clinic. It is currently deployed in 7 outpatient clinics in Botswana and has 60K plus patient files in my databases. All systems are utilized offline.

## TECH SKILLS

Front End:	HTML, CSS, Bootstrap, Tailwind CSS, Materialize CSS, Chakra UI, JavaScript, jQuery, Ajax, JSON, React, React Native, Expo, SEO, WPO, PWA.
Back End:	XML, SQL, MySQL, Redis, PHP, Botman, Restful & SOAP API's, Python, FastAPI, C++, Twilio, Africa is Talking.
Data Science:	ETL, EDA, Data Visualization, NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, TensorFlow, Keras, Machine & Deep Learning Algorithms, Streamlit, Dialogflow, MLOps.
Other Tools & Skills:	Git & GitHub, UML, A/B Testing, Pytest, Jest, Cypress, DevOps, Cloud Technologies, Postman, System Design, Design Patterns, People Skills, Presentation Skills, Microsoft Office.