BUKHOSI NGQABUTHO KHUMALO

Block 41/1343, Mpopoma, Bulawayo

+263783550720 | khumalobukhosi41@gmail.com | Kartolabs: Portfolio Website

Date of Birth: 22/September 1993 Date of Availability: As soon as possible

Place of Birth: Lupane Present Salary: None

POST-SECONDARY EDUCATION

• MSc Cartography and Geo-Informatics, Perm State University, Russia (Link) 2020-2022

Thesis: "Modelling of water erosion risk of Umzingwane Catchment Area for Integrated Water Resources Management"

Final grade: First class (5) Top 5%

• BSc Geography and Population Studies , Lupane State University (Link) 2014-2018

Thesis: "A time series modelling of soil loss using the Revised Universal Soil Loss Equation (RUSLE) in the Shake River Catchment, Gwanda District, Zimbabwe"

Final grade: First class (1) Top student

RELEVANT WORK EXPERIENCE

Lupane State University, Zimbabwe

29 September 2022- Present

Part time Lecturer: I am effectively teaching courses such as Principles of GIS, Research Methods, Climatology and Meteorology, Introduction to GIS and Remote Sensing, Environmental Impact Assessment and Land degradation and reclamation. I am also supervising over 7 undergraduate research projects.

Perm State University GIS Center, Russia (Link)

January- April 2022

Intern: As an intern at the PSU GIS Center I worked on a random forest model to predict forest cover disturbances using a Google Earth Engine Python API (Geemap). I gained skills such as machine leaning, Python programming, Google Earth Engine and Statistica

Dabane Water Workshops, Zimbabwe (Link)

Aug 2016-Jul 2017

Geographic Information Systems intern: I managed spatial databases, conducted soil erosion modelling, performed spatial data analysis using Arcmap and QGIS, monthly Vegetation monitoring, developed environmental management plans, conducted social and technical surveys, facilitated community trainings on climate change, gender and environmental conservation works, worked with geography clubs in schools and wrote activity, monthly and annual reports.

• Ministry of Primary and Secondary Education, Lupane, Zimbabwe Jan -Aug 2014 I effectively taught grade 7 and grade 4 classes at Gegema and Jotsholo Primary schools respectively.

Sinovuyo Caring Fammilies Programme for Parents and Teens Insiza Godlwayo AIDS Council (October 2019)

• Trained to be a Positive Parenting Program Facilitator

Resilience to the Effects of Climate Change through Integrated Water Resources Management in Southern Zimbabwe Dabane Trust (2016-2017)

Responsible for:

- GIS and Remote sensing data management and analysis
- Data collection and Analysis, Social feasibility surveys, Technical feasibility surveys and mid-term reviews.
- Soil, Vegetation and Weather condition monitoring.
- Coordinating and networking with other partners, district stakeholders and local leaders.
- Work plans, Monthly, Quarterly and Annual reports
- Environmental conservation works- (gulley reclamation, Contours)
- Developing Environmental Management Plans for Dams.
- Involved in the installation of pumps, solar and tanks.
- Facilitating trainings and workshops

Sustainable Energy for Rural Communities (SE4RC) Dabane Trust (2017)

Involved in:

- Irrigation infield works assessments, Irrigation infield works rehabilitation
- Water supplying resuscitation and installations
- Project monitoring

Amalima Project (USAID – Funded - (2014-2016) Dabane Trust (2017)

Involved in:

- Cleaning and management of GIS Data (Clinics and Boreholes).
- Map creation.

TROICARE- Women Seed and Nutrition Project Dabane Trust (2017)

Involved in:

- Conducting surveys, data collection
- Map creation

Access to Natural Resources and Women Empowerment Dabane Trust (March 2017)

Responsible for:

- Baseline survey data collection.
- Creation of baseline survey maps.

RESEARCH EXPERIENCE & INTERESTS

I have an undergraduate and post graduate research experience in soil erosion modelling using empirical models and geospatial technologies. My current research interest include the use of machine learning models for biodiversity monitoring, climate change impact modelling and prediction of dangerous hydro meteorological hazards.

PERSONAL SKILLS.

I possess excellent organizational, communication, teaching, and ethical decision-making skills. Able to establish and maintain effective working relationships with colleagues and stakeholders. I'm able to exercise the judgment, determination, and creativity necessary in situations involving the achievement of measurable goals.

ICT SKILLS

Spatial database management (PostGIS), Spatial Data Analysis (ArcMap, QGIS, Python, R, Arcpy, ENVI, Easy Trace, SAGA GIS), Cloud computing (Google Earth Engine), GIS Web development (Geoserver, GitHub, Open Layers, HTML, JAVA and CSS), Graphic designing (Photoshop, Illustrator, Indesign, Davinci Resolve), Microsoft office, Statistical analysis (SPSS, Stat Graphics, Statistica)

HONORS AND AWARDS

•	Department of Cartography and Geo-informatics hall of fame for distinct achievements	2021
•	Best graduating student in Geography and Population Studies, Lupane State University	2018
•	Two university book prices, Lupane State University	2018
•	Vice Chancellors Price, Lupane State University	2018
•	Better Schools Program Zimbabwe (BSPZ) Award	2014

LANGUAGES

Fluent in English, Mother Language: Ndebele and other languages include Russian and Shona.

INTERESTS AND HOBBIES

Networking, YouTubing, Researching, Teaching, public speaking, rural soccer development

MEDIA COVERAGE

05-05-2019	Sunday News- Lupane based soccer academy grows. (Link)
10-05-2019	B-Metro – Lupane Junior teams soccer gala (<u>Link</u>)
15-10-2020	Community Podium- Boost for Lupane education group (Link)

REFEREES

Lupane State University

Chairperson – Dept. of Geo and Geo-Information Science

Nkululeko Ndiweni

+263772730463/ njndiweni@gmail.com

Perm State University

Lecturer

Tarasov Andrey Vladimirovich

+7 (342) 239-66-33

Andrew.tarasov1993.study@gmail.com

Dabane Trust

Project Manager-IWRM

Olwin Manyanye

+263-712 920 702

Perm State University

Academic Supervisor

Berezina Olga Alekseevna

+7 (342) 239-67-34

berezina.olga16@gmail.com