

Curriculum Vitae

Personal Information

Name	Gerhardt Botha
Address	96 Hoffman Street, Potchefstroom, 2520, South Africa
Telephone	+27 67 401 6483
Email	gerhardtbotha5@gmail.com
Nationality	South African
Date of birth	29.09.1998
Gender	Male

Work Experience

Dates	01.01.2021 - present
Position held	Research Intern
Name and address of employer	Climatology Research Group, North-West University, Potchefstroom
Main activities and responsibilities	Project management, software development, data analysis, technical report writing, lecturing and training, air quality monitoring and research, weather radar and meteorological research, geospatial and remote sensing analysis
Dates	01.11.2019 – 14.12.2020
Position held	Research Assistant
Name and address of employer	Climatology Research Group, North-West University, Potchefstroom
Main activities and responsibilities	Research assistance, data collection and analysis, software development, geospatial and remote sensing research and analysis

Education

Dates	2021 - present
Name of organisation and location	North-West University, Potchefstroom
Title of qualification awarded	Masters of Science in Environmental Science
Principal subjects/skills	Air quality, remote sensing, weather radar
Dates	2020
Name of organisation and location	North-West University, Potchefstroom
Title of qualification awarded	Bachelor of Science Honours in Environmental Sciences with Geography and Environmental Management (Cum Laude)
Principal subjects/skills	Earth observation, air quality, disaster risk reduction and climate change adaptation, applied GIS
Dates	2016 - 2019
Name of organisation and location	North-West University, Potchefstroom
Title of qualification awarded	Bachelor of Arts in Psychology, Geography and Environmental Management
Principal subjects/skills	Geography, psychology
Dates	2012 - 2016

Name of organisation and location	Highschool Garsfontein, Pretoria
Title of qualification awarded	High School Diploma
Awards	
Dates	2020
Name of organisation and location	Golden Key International Honour Society
Award	Golden Key Academic Achievement Award
Dates	2020
Name of organisation and location	The South African Society for Atmospheric Sciences
Award	1 st Place for Best Student Presentation
Computer Skills	
Statistics	Python, R, Excel
Programming	Python
Google Workspace	Proficient in all google workspace productivity tools (Docs, Spreadsheets, Slides, Forms, etc.)
Virtual conferencing	Experienced in online workspace and classroom tools (Microsoft Teams, Zoom, Google Meet, WhatsApp, Slack)
Operating Systems	Windows and Linux operating systems
Scripting	Shell scripting (BASH, TCSH)
Web development	Full Stack Development with Flask, HTML, CSS
GIS	ArcGIS, QGIS, Google Earth Engine
TITAN	Configurations and administration of TITAN software for radar statistics and analytics
Personal Skills	
Social skills	Driven, punctual, friendly, conscientious, patient, respectful
Organizational skills	Committed, able to work in a multidisciplinary team under high pressure, passion for learning and research
Technical skills	Proficient in various technologies with the ability to learn, and teach new technologies with ease
Driver license	Code B
Field Campaigns	
Dates	01.09.2019 - 30.09.2021
Project	Sasol Zamdela continuous air quality monitoring
Responsibilities	Instrument maintenance, data analysis, report writing
Dates	09.08.2021 - 30.09.2021
Project	The UAE Research Programme for Rain Enhancement Science (UAEREP)
Responsibilities	Weather forecasting, software development, technical report writing
Dates	21.07.2021 - 01.09.2021
Project	Nova Institute Smash Block Air Quality Baseline Assessment
Description	Led the low-cost air quality monitoring and source apportionment campaign
Responsibilities	Project management, data analysis, technical report writing

Dates	01.09.2020 - 31.08.2021
Project Description	Nova Institute and Anglo American Platinum Air Quality Offsets Led the development and deployment of 8 air quality monitoring sites in Northam and Rustenburg, South Africa.
Responsibilities	Project management, data management and analysis, technical report writing
Dates	01.02.2021 - present
Project Description	NWU Medical Research Council Vaal Low-Cost Sensor Study
Responsibilities	Data analysis, report writing
Dates	10.06.2021 - 01.07.2021
Project Description	Gobabeb Namib Research Institute: Fog detection in the Namib desert Supplied and installed soil moisture and leaf wetness sensors in the Namib desert and gravel plains. Performed data analysis
Responsibilities	Instrument deployment, development, data analysis
Dates	14.05.2021 - 17.05.2021
Project Description	Manhica Health Research Centre (CISM) meteorological station Supply and install a meteorological station for the CISM in Mozambique
Responsibilities	Instrument deployment
Dates	16.11.2020 - 20.11.2020
Project Description	National Association for Clean Air (NACA) Annual conference 2020 Part of the technical team for the NACA 2020 conference
Responsibilities	IT support
Dates	06.10.2021 - 08.10.2021
Project Description	National Association for Clean Air (NACA) Annual conference 2021 Provided technical support for the NACA 2020 conference
Responsibilities	IT support, virtual conference organisation
Dates	2021
Project Description	Aerosol Robotic Network (AERONET) Cimel Sunphotometer NWU network Responsible for the NWU sunphotometer network in Upington, Skukuza & Carletonville
Responsibilities	Project management
Dates	10.01.2021 - 14.10.2021
Project Description	South African mine tailings GIS mapping
Responsibilities	GIS mapping
Dates	
Project Description	
Responsibilities	

Lecturing

Courses and Workshops

Dates	21.01.2021
Name of organisation	AS Driving
Title of course	Defensive driver training

Dates	2021
Name of organisation	Coursera
Title of course	Python for Data Analysis: Pandas & NumPy
Dates	2021
Name of organisation	Coursera
Title of course	Basic Statistics in Python (ANOVA)
Dates	20.01.2021 - 24.01.2021
Name of organisation	Centre for High-Performance Computing
Title of course	CHPC Linux and Python Training School for the North-West University's Faculty of Natural Sciences

Papers Presented

Date	2021
Name of conference	National Association for Clean Air (NACA)
Title of paper	Weather radar observations of particulate plumes
Date	2020
Name of conference	South African Society for Atmospheric Science
Title of paper	Improving radar-derived rainfall estimates of extreme events on the South African Highveld

Community outreach

Date	2021
Name of project	South African Agency for Science and Technology Advancement (SAASTA) National Science Week air quality documentary titled "Science addressing air quality in South Africa"
Responsibilities	Contributed to SAASTA National Science Week by talking about low-cost sensors for air quality management in the documentary
More info	https://www.youtube.com/watch?v=tIghFFn22Nc

Links

LinkedIn	https://www.linkedin.com/in/gerhardt-botha/
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References

Prof Roelof Burger
Associate Professor, North-West University, Potchefstroom
+27 82 563 9776
Roelof.burger@nwu.ac.za

Mr Henno Havenga
Lecturer, North-West University, Potchefstroom
+27 74 376 2844
hhavenga92@gmail.com

Prof Stuart Piketh
Director, School for Geo- and Spatial Sciences, North-West University, Potchefstroom
+27 18 299 1582
Stuart.piketh@nwu.ac.za