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| **Athenkosi Ntshate** | **Mobile [+27 (0) 61 0377 930]****ntshatea@gmail.com****s216032865@mandela.ac.za** | **Address :** 63317 Mzilikazi Street  New Brighton Port Elizabeth 6001 |
| *I am enrolled for a Master of Science in* ***Construction Management*** *at* ***Nelson Mandela University****. I possess a special interest in the application of GIS and remote sensing in the fields of natural resources management, climate change, built-environment, engineering and agriculture.**I am a member of the* ***GISSA Eastern Cape Branch*** *and registered with the* ***South African Council for Professional and Technical Surveyors (SAGC)*** *as a* ***GISc Technician (GTc GISc. 2138).*** *I possess a valid driver’s license, Code B. I have over 3 years’ experience with ESRI ArcGIS suite and software tools in the fields of Built Environment mapping and GIS analysis.* |

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| EDUCATION & TRAINING |
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| 2018 -2020 | Candidate Master of Science in Construction Management | **Nelson Mandela University**  |
| *Planning and Design in the Built Environment: A GIs Approach* |
| 2017 | Bachelor of Science (Honours), Geographical Information System (GIS) | **Nelson Mandela University** |
| *Monitoring the spread of Acacia Mearnsii using GIS & Remote Sensing in the Eden District Municipality* |
| 2012 | Bachelor of Science majoring in Geology & Geographical Information Systems | **University of Fort hare** |
| 2007 | National Senior Certificate | **Emfundweni Senior Secondary School** |

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|  | SHORT COURSES AND TRAINING |
| 2018 | Hyperspectral Thermal Image Unmixing  | **GEO University**  |
| 2018 | Earth Imagery at Work  | **ESRI South Africa**  |
| 2017 | Geomatics Technician Certificate  | **South African Geomatics Council**  |
| 2016 | Hyper Spectral Remote Sensing Course | **Nelson Mandela University** |
| 2016 | Project management Short Course | **Department of Human****Settlements and Eastern Cape Office of the Premier** |
| 2016 | Environmental Impact Studies course dealing with EMS & ISO 14001 Implementation | **Nelson Mandela University** |
| Sep 2016 – Nov 2016 |
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| 2015 | ArcGIS I: ARC Basic (TRN 15-193) Short Course | **Department of Human****Settlements** |
| 2014 | Breaking Barriers to entry into the Public Service with School of government (Cert #: 263700) | **Department of Human****Settlements** |

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| AWARDS AND ACHIEVEMENTS |
| 2007 | Grade 12 Best Mathematics, IsiXhosa and Geography Achiever, Emfundweni S.S.S. |
| MEMBERSHIPS OF PROFESSIONAL ASSOCIATIONS |
| Member of the GISSA (Geo-Information Society of South Africa) Eastern Cape Branch since 2014*GISc Technician (GTc GISc 2138)* with the *South African Council for Geomatics (SAGC)* with effect from 2017 |

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| WORK EXPERIENCE |
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| 2019-2019 | **Senior GIS Market Analyst at Fernridge Solutions (Pty) Ltd: July 2019**  |
|  | * Lead and support the creation of prosperous cities and towns by restructuring the space economy
* Generate informative maps via special Geographic Information System (GIS) Software (ArcGIS Online) concerning variables of the area.
* Using ArcGIS Online Create, acquire, design and maintain a variety of spatial data layers and associated attributes.
* Manipulate, analyse and interpret geological, geophysical and geo-social data from many sources and format types.
* Using Arc GIS Online digitize natural, social and physical attributes and interpreting the spatial distribution of these attributes.
* Conduct market research from a spatial and geographical perspective.
* Conduct feasibility studies for numerous shopping centre developers by integrating various types of data, GIS Software and spatial interpretation.
* Deliver demographic based studies.
* Data Collection through field work utilizing GPS and Primary research through questionnaires.
* Organise, analyse and present relevant information to decision makers whenever business decisions are required regarding new proposed shopping centres/development.
* Provide decision makers with well written, coherent executive summaries with supporting maps and appropriate data models.
* Conduct market research from a spatial and geographical perspective.
* Perform physical site and area inspections.
* Conduct feasibility studies for numerous shopping centre developers by integrating various types of data, GIS Software and spatial interpretation.
* Compile geographic data from a variety of sources including census, field observation, satellite imagery, aerial photography and existing maps.
* Data collection from site using GPS, digitize and conversion.
* Analyse data, Statistical Calculations and performing queries
* Update dwelling frame point, Data capturing, Aerial imagery analysis, Drive Time Analysis, Dilution Maps, Geocoding & Spatial Analysis.
* Implement and manage GIS projects/tasks requiring statistical and spatial analysis
 |
| 2019-2019 | **GIS Technician/Project Manager at Department of Corporative Governance and Traditional Affairs: January 2019 – June 2019** |
|  | **Develop Geo-spatial map profiles depicting economic development initiatives in the pilot townships.*** Lead and support the creation of prosperous cities and towns by restructuring the space economy
* Develop Integrated Township Economic Development Programme
* Develop a report on planning frameworks impeding township economic development
* Facilitate the restructuring of municipal space economy through integrated development planning and spatial targeting
* Support the creation of an enabling environment for municipalities to achieve inclusive economic development through the implementation of initiatives of the National Framework for LED

**Development of GIS community of practice.*** Develop the Terms of Reference for the Geomatics community of practice.
* Convene the GIS Community of Practice.
* Conduct an Assessment on the functioning of the Geomatics Community of Practice fora & develop a report on the key findings.

**Supported x5 Intermediate City Municipalities to Build GIS Capacity*** Provide Technical Support to Intermediate City Municipalities across South Africa.
* Acquisition and Management of Spatial Information.
* Conduct a gap/requirements analysis for the targeted ICM’s
* Develop a Methodology and Gap Analysis Plan
* Develop Data Collection instrument and collect data.
* Conduct data analysis.
* Implement GIS Capacity Support plan in x5 ICM’s
* Develop a GIS Capacity support report for the supported ICM’s

**Perform GISc activities to improve spatial decision making for problem solving*** Capture and clean Spatial Data
* Source Spatial information from various data custodians
* Advise on Coordinate Systems and projections
* Provide inputs in the maintenance of the spatial databases
* Produce customized maps to meet client’s needs.

**Maintain GISc Unit Effectiveness** * Maintain GISc Tools
* Compile content for Web publishing
* Capture Metadata
* Update GISc Software and renewal of licences
* Document GISc processes
 |
| 2017 –2019 | **Professional Development Program at Coega Development Corporation: December 2017 – January 2019** |
|  | * Responsible for performing professional GIS duties while assisting engineers, surveyors, and environmental scientists with their daily activities;
* Assist the GIS Manager and Project managers with all GIS related activities.
* Review Site Development Plans.
* Assist the Project Development and Spatial Planning Manager with site selection evaluate any new possibilities.
* Cartography - Produce customised thematic maps to meet clients’ needs and GIS reports.
* Preform different duties such as sourcing, collecting, verifying, managing, querying & analysis of spatial data.
* Elevation/surface model generation to calculate spoil area volume using ArcGIS Pro and Pix4D Images.
* Engaging with external consultants appointed to perform preliminary engineering studies and site design in a Design Review Committee (DRC).
* Assist the external consultants in documenting and administering all project related information, as required.
* Provide Geospatial Information Services to defined Coega Development Corporation external clients (e.g. Provincial government, National government departments, CIDB).
* Deliver assigned tasks and activities on time, on-schedule, within budget to agreed quality.
* Modelling and visualization of the Coega SEZ with geospatial information technologies
* Data capturing, collection, processing and analysis of Geospatial data.
* Prepare and interpret metadata using the prescribed National Standards,
* GIS Database management - understanding of data capturing, cleansing & QA techniques
* Develop and maintain web-based system for distributing core GIS layer over the CDC intranet
* Update GISc software and renewal of licences and documentation of GISc process.
* Using predominantly As- Built CAD drawings from the drawing register for digitizing and populating data to develop infrastructure networks such as IDZ Services [Sewer, Water, Electrical (Under-ground and Overhead), Fibre, Stormwater], Geo-tech etc.
* Update and manage Coega Development Corporation’s Drawing Register,
* Liaise with Service providers, Project and Zone Managers for As Built and Final Design drawings for projects in the SEZ, Construction Village and NMBLP,
* Ensure the safe storage of information is received,
* Ensure drawings are submitted according to CDC CAD standards provided,
* Correct projections of old and new drawings
* Scan and print large format CAD drawings.
* Convert CAD datasets into a GIS, utilizing Geo-referencing and Editing tool in ArcGIS.
* Digitising buildings, spoil areas, Land Use and Land Cover, etc. from aerial photography and satellite images.
* Assist management of site allocations for investors according to the Development Framework Plan and based on information supplied in Business Solution Assessment.
* Coordinate Design Review Committee meetings to evaluate Site Development Plans,
* Ensure rezoning, consolidation and subdivision applications for erven in the SEZ, Construction Village and NMBLP are conducted,
* Facilitate de-proclamation of roads in the SEZ and NMBLP,
* Assist the process of attaining Occupational Certificates for buildings in the SEZ, Construction Village and NMBLP,
* Manage and maintain planning information pertaining to the ID, Construction Village and NMBLP,
* Coordinate Integrated Planning meetings between relevant stakeholders within CDC.
* Undertake spatial analysis with regards to GIS project;
* Data manipulation and queries using SQL databases
* Source, capture and clean spatial data from various data custodians;
* Under SHEQ unit, I assist in monitoring tenant effluent discharge and Storm-water quality.
* Performed basic GIS operations under the Director of GIS & Director of Town Planning, including using geo-processing tools, and creating as well as editing geographic data sets.
* Receive technical documentation of engineering projects in process and completed projects and utilizing procedures to import or digitize data.
* Concurrently undergoing the Professional GISc Practitioner training as per the requirements of the PLATO Act 40 of 1984.
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| 2017-2017 | **Gemini GIS and Environmental Services: July 2017 – September 2017****Remote Sensing and GIS Specialist (Volunteering)** |
|  | * Drone Pilot
* Data capture
* Data Analysis using Pix4D
* Satellite Imagery sourcing, image processing
* Experience in visual impact assessments
* Data capturing, conversion and editing including (scanning and geo-referencing)
* Spatial data analysis and modelling
* Relational Database and geodatabase design, implementation and management
* GIS training and support
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| 2016-2016 | **Nelson Mandela University: GIS Demonstrator: February 2016 – November 2016** |
|  | * Undertaking practical demonstrations for students 1st, 2nd and 3rd years.
* Responding to questions and giving explanations.
* Satellite Imagery sourcing, image processing
* Marking practical scripts and assignments.
* Assisting in general administrative duties
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| 2014 – 2016 | **Department of Human Settlements (Head Office):****GIS Technician Intern: April 2014 – 31 January 2016** |
|  | * Produced appropriate GIS reports and thematic maps; Create and modify maps, graphs, diagrams, or other visual representations of geographic data for provincial Strategic Planning.
* Map interpretation and knowledge of the application of GIS in Built Environment and Human Settlement Development.
* Source spatial information from data custodians.
* Analyse spatial data in a provincial environment.
* Perform innovative provincial spatial analysis and produce reports.
* Proficient in operating GIS system hardware, software, plotter, GPS, etc.
* Prepare & submit timely and accurate reports to GIS specialist
* Capture by means of a GPS, edit and analyse data to create new GIS layers; also using various methods such as on-screen digitizing; field collections; etc.
* Data manipulation and analysis including quality assurance
* Create and maintain spatial data topology and attributes.
* Apply geo-referencing, datum and projection transformations
* Design, develop and create geo-databases, and another related project
* Promote and participate in stakeholder relations & Maintaining GIS unit effectiveness.
* Keep up with the technology developments in the GIS industry and give advice on the latest technologies.
* Desktop Support (Install, Configure and Maintain both Computers and Printers)
* LAN SUPPORT (Ensure that all Departmental LAN and Data is secure and is backed up, virus free and functioning optimally).
* Installing, configuring user’s PC’s and joining them on the windows domain
* Format and Reload of User machines, ensuring all user data is backed up and secured before format.
* Managing the Departmental Network Printers and Backup Monitoring
* User rights management via group membership changes in active directory.
* Ensuring servers are online and mailboxes are connected after Load shedding.
* 3Com Switch ports configuration.
* Data Centre maintenance (clean-up, monitoring of servers, air conditioners and Access control)
* Monitoring LAN using 3Com Intelligence Management Console (IMC)
* Follow-up on all unresolved calls, with feedback being provided back to client.
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| **SPECIALISED SKILLS AND ABILITIES** |
| **Skill matrix** | **No practical experience** | **Practical experience** | **Solid practical experience** | **Well versed, extensive experience** | **Expert, extensive experience** |
| **ArcGIS Desktop (10.5)** |
| ArcMap |  |  |  |  | **X** |
| ArcInfo |  |  |  | **X** |  |
| ArcCatalog |  |  |  | **X** |  |
| ArcView |  |  |  | **X** |  |
| ArcEditor |  |  |  | **X** |  |
| ArcGIS Explorer |  |  | **X** |  |  |
| ArcGlobe |  |  | **X** |  |  |
| ArcGIS Extensions (Publisher) |  |  |  | **X** |  |
| ArcGIS Extensions (3D Analyst) |  |  |  | **X** |  |
| ArcGIS Extensions (Geostatistical Analyst) |  |  |  | **X** |  |
| ArcGIS online |  |  |  |  | **X** |
| ArcGIS Extensions (Tracking Analyst) |  |  | **X** |  |  |
| ArcGIS Pro |  |  |  |  | **X** |
| Survey123 |  |  |  |  | **X** |
| **Other GIS environment**  |
| QGIS |  |  | **X** |  |  |
| Grass-GIS |  | **X** |  |  |  |
| **Statistics**  |
| SAS Enterprise Guide |  |  | **X** |  |  |
| R |  |  | **X** |  |  |
| **Remote Sensing & photogrammetry**  |
| ENVI |  |  |  | **X** |  |
| IDRISI Taiga |  |  | **X** |  |  |
| TerrSet |  |  | **X** |  |  |
| Erdas Imagine |  |  | **X** |  |  |
| ParLes |  | **X** |  |  |  |
| Darwin |  | **X** |  |  |  |
| Using an ASD field spectrometer |  | **X** |  |  |  |
| **Microsoft Office suite (2007-2013)** |
| Word |  |  |  |  | **X** |
| Excel |  |  |  |  | **X** |
| PowerPoint |  |  |  |  | **X** |
| Visio |  |  |  | **X** |  |
| Access |  |  |  | **X** |  |
| Publisher |  |  | **X** |  |  |
| **Computer-Aided Design (CAD)** |
| Google SketchUp |  |  | **X** |  |  |
| AutoCAD |  |  | **X** |  |  |
| **Programming/Web Applications** |
| python |  | **X** |  |  |  |
| Postgre SQL |  | **X** |  |  |  |

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| REFEREES |
| Name Ms. Angeline Sehone Occupation GIS Manager – National COGTAE-mail Angeline.Sehone@cogta.gov.za Contact Details 0798917995Name Ms. Firhana SamOccupation GIS Administrator – Coega Development CorporationE-mail Firhana.Sam@coega.co.za Tell 041-403 0471Contact Details 0836614113Name Dr. W. BritzOccupation Lecturer/Supervisor - Nelson Mandela University E-mail Wilma.Britz@nmmu.ac.za Tell 041-504 2432Contact Details 0828943404Name Ms. S. Mange (GT1677)Occupation GIS Technician – Eastern Cape Department of Human SettlementsE-mail SinazoMa@ecdhs.gov.za Tell 043 711 9882Contact Details 073 141 5778 |