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| **Athenkosi Ntshate** | **Mobile [+27 (0) 61 0377 930]**  [**ntshatea@gmail.com**](mailto: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. |
| 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 |
| 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 |
| 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 |
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