A career in Geoinformatics

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The GISc Profession

What is a profession?
• a vocation requiring knowledge of some science

Why a profession?
• Body of knowledge
• Formal organization of the members of the profession
• Code of ethics
The GISc Profession

Since 2004 in South Africa
• Registration as GISc technician, technologist or practitioner
• South African Council for Professional and Technical Surveyors (PLATO) www.plato.org.za
  — To be replaced by a new council in the near future

Since 2009 in SA government departments
• Occupation Specific Dispensation (OSD)
• GISc registration required as part of career pathing model (salary adjustments)
The GISc Profession

GISc Practitioner
• BSc Hons Geoinformatics
After formal education
• Pass legal exam
• Training under suitable mentor
• Practical test

GISc Technologist
• BSc Geoinformatics
Career opportunities

Crime analysis
Market research
Medical industry
Transportation planning
Cartography
Disaster Management
Crime Analysis

What does a crime analyst do?

- Study crime
- Case management (Forensics)
- Analyze crime data to forecast where crime might occur
- Communicate crime patterns

Where are they employed?

- Police department
- Insurance companies
Profiling Serial Killers

Map Superimposed over Geographical Profile
Body Locations
Predator Computer System
Dr. Maurice Godwin
Crime Monitoring
Market Research

What does a market research analyst do?
• Analyze statistical data on sales to predict future sales
• Analyze prices, sales, marketing and distribution
• Recommend new locations for stores

Where are they employed?
• Banks
• Fuel providers
• Retail Industries such as Massmart
• Service providers such as MTN
Outlet analysis

Blue Sky Option Appraisal Projects - Level 1 Hospital 60min Travel Time Analysis

Study by AfriGIS
Market analysis

Study by AfriGIS
Medical industry

How is GIS used in the medical industry?
- Mapping outbreaks
- Predicting disease using trends
- Mapping environmental stresses that lead to disease

Where are they employed?
- Health agencies
- World Health Organization [www.who.int](http://www.who.int)
- NGOs
- Medical Research Council [www.mrc.ac.za](http://www.mrc.ac.za)
HIV/AIDS in the world

HIV/AIDS in the world

HIV/AIDS in the world

Duration of malaria transmission season

Source: www.mara.org.za
Transportation Planning

What does a transportation planner do?
- Plan new transport routes
- Monitor traffic congestion
- Logistical planning for public transport systems

Where are they employed?
- Transport agencies (SANRAL [www.sanral.co.za](http://www.sanral.co.za))
- Road agencies [www.jra.org.za](http://www.jra.org.za)
- Civil engineering consultants
Rail Planning

Gautrain Planning

London Underground
Cartography

What does a cartographer do?
• Design high quality map products
• Define production specifications e.g. projection, scale
• Revise existing maps
• Collect, analyze and interpret geographic information

Where are they employed?
• Private companies
• National Geospatial Information (NGI) www.ngi.gov.za
MapAction Earthquake Map
Disaster Management

What does a disaster planner do?
• assists people in case of natural phenomena (fires, flooding, hail, lightning)
• Predict disasters to minimize damaged

Where are they employed?
• Disaster Management Companies
• Municipalities
• Parastatal organizations such as CSIR, ESKOM, ARC
Japanese Tsunami
Alexandra Flooding
Acknowledgements

Information about the Geoinformatics programmes at UP is available at www.up.ac.za/cgis, click on ‘Education & Training’

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Contact

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